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BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

EDITED BY

DR. G. CARMICHAEL LOW.

VOLUME LXIII.

SESSION 1942–1943.

LONDON:

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1943.

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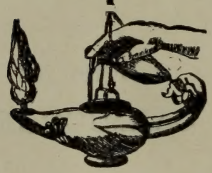

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PREFACE.

THERE is little to report about the Session 1942–1943. The Annual General Meeting was held on Saturday, October 24, 1942, when 20 members were present. It was agreed to have meetings similar to those of last session again, where possible, and a suggestion was also made that evening meetings might be resumed in summer.

Four meetings of the Club were held. In October (Annual General and Ordinary Meeting), in November, in May (in conjunction with the British Ornithologists' Union in place of their usual Annual General Meeting in March) and in June. No meeting of the Club was held in February, but a Bulletin was published for that month in March (1943). The first three meetings were held on Saturday afternoons, the fourth and last for session (the June Meeting) in the evening after a dinner.

The number of attendances for the Session was as follows :—81 members of the Club, 5 members of the B.O.U., 1 guest of the Club and 22 other guests, a total of 109, a reduction from the previous session, partly accounted for by there being one meeting less.

There was no Chairman's Address.

Mr. B. W. Tucker gave an interesting talk on " Some Ornithological Trips on the Continent " (illustrated by lantern-slides). Dr. Carmichael Low read a paper for Count K. A. Wodzicki, Consul-General for Poland in New Zealand, on " Observations on the Avifauna and Ornithological Work in New Zealand ", and Dr. Landsborough Thomson opened a discussion on " Physiological Races ". At the combined Meeting of the Union and the Club, Major Anthony Buxton showed a series of slides and films which were much appreciated by those present.

New forms were described by Mr. P. A. Clancey, Captain C. H. B. Grant and Lt.-Colonel Mackworth-Praed, Mr. C. W. Benson, Mr. C. M. N. White, Mr. Hugh Whistler and Dr. D. A. Bannerman.

Mr. N. B. Kinnear exhibited, on behalf of Mr. C. W. Benson, a specimen of the rare *Zavattariornis stresemanni* Moltoni, from Southern Abyssinia, and Dr. Carmichael Low showed a photograph from Count Wodzicki of a Royal Albatross and exhibited a specimen of the Andean Gull.

Captain C. H. B. Grant and Lt.-Colonel Mackworth-Praed have continued their notes on Eastern African Birds.

As war restrictions were relaxed luncheons were again permitted, and as stated above, the last Meeting of the Club for the session, held in June, was an evening one following a Dinner.

The Club entertained as a distinguished Guest W. J. Sillem from America.

G. CARMICHAEL LOW,
Editor.

London, July 1943.

BRITISH ORNITHOLOGISTS' CLUB.

(Founded October 5, 1892.)

TITLE AND OBJECTS.

The objects of the Club, which shall be called the "British Ornithologists' Club," are the promotion of social intercourse between Members of the British Ornithologists' Union and to facilitate the publication of scientific information connected with ornithology.

RULES.

(*As amended, October* 12, 1938.)

Management.

I. The affairs of the Club shall be managed by a Committee, to consist of a Chairman, who shall be elected for three years, at the end of which period he shall not be eligible for re-election for the next term ; two Vice-Chairmen, who shall serve for one year, and who shall not be eligible for the next year ; an Editor of the 'Bulletin,' who shall be elected for five years, at the end of which period he shall not be eligible for re-election for the next term ; a Secretary and a Treasurer, who shall each be elected for a term of one year, but who shall be eligible for re-election. There shall be in addition four other Members, the senior of whom shall retire each year, and another Member be elected in his place ; every third year the two senior Members shall retire and two other Members be elected in their place. Officers and Members of the Committee shall be elected by the Members of the Club at a General Meeting, and the names of such Officers and Members of Committee nominated by the Committee for the ensuing year shall be circulated with the notice convening the General Meeting at least two weeks before the Meeting. Should any Member wish to propose another candidate, the nomination of such, signed by at least two Members, must reach the Secretary at least one clear week before the Annual General Meeting.

II. Any Member desiring to make a complaint of the manner in which the affairs of the Club are conducted must communicate in writing with the Chairman, who will, if he deem fit, call a Committee Meeting to deal with the matter.

III. If the conduct of any Member shall be deemed by the Committee to be prejudicial to the interests of the Club, he may be requested by the Committee to withdraw from the Club. In the case of refusal, his name may be removed from the list of Members at a General Meeting, provided that, in the notice calling the Meeting, intimation of the proposed resolution to remove his name shall have been given, and that a majority of the Members voting at such Meeting record their votes for his removal.

Subscriptions.

IV. Any Member of the British Ornithologists' Union may become a Member of the Club on payment to the Treasurer of an entrance-fee of one pound and a subscription of one guinea for the current Session. On Membership of the Union ceasing, Membership of the Club also ceases.

Any Member who has not paid his subscription before the last Meeting of the Session shall cease, *ipso facto*, to be a Member of the Club, but may be reinstated on payment of arrears.

Any Member who has resigned less than five years ago may be reinstated without payment of another Entrance Fee.

Any Member who resigns his Membership on going abroad may be readmitted without payment of a further Entrance Fee at the Committee's discretion.

Temporary Associates.

V. Members of the British Ornithologists' Union who are ordinarily resident outside the British Isles, and ornithologists from the British Empire overseas or from foreign countries, may be admitted at the discretion of the Committee as Temporary Associates of the Club for the duration of any visit to the British Isles not exceeding one Session. An entrance fee of five shillings shall be payable in respect of every such admission

if the period exceeds three months. The privileges of Temporary Associates shall be limited to attendance at the ordinary meetings of the Club and the introduction of guests.

Meetings.

VI. The Club will meet, as a rule, on the second Wednesday in every month, from October to June inclusive, at such hour and place as may be arranged by the Committee, but should such Wednesday happen to be Ash Wednesday, the Meeting will take place on the Wednesday following. At these Meetings papers upon ornithological subjects will be read, specimens exhibited and described, and discussion invited.

VII. A General Meeting of the Club shall be held on the day of the October Meeting of each Session, and the Treasurer shall present thereat the Balance-sheet and Report; and the election of Officers and Committee, in so far as their election is required, shall be held at such Meeting.

VIII. A Special General Meeting may be called at the instance of the Committee for any purpose which they deem to be of sufficient importance, or at the instance of not fewer than fifteen Members. Notice of not less than two weeks shall be given of every General and Special General Meeting.

Introduction of Visitors.

IX. Members may introduce visitors at any ordinary Meeting of the Club, but the same guest shall not be eligible to attend on more than three occasions during the Session. No former Member who has been removed for non-payment of subscription, or for any other cause, shall be allowed to attend as a guest.

'Bulletin' of the Club.

X. An Abstract of the Proceedings of the Club shall be printed as soon as possible after each Meeting, under the title of the 'Bulletin of the British Ornithologists' Club,' and shall be distributed gratis to every Member who has paid his subscription.

Contributors are entitled to six free copies of the ' Bulletin, but if they desire to exercise this privilege they must give notice to the Editor when their manuscript is handed in. Members purchasing extra copies of the ' Bulletin ' are entitled to a rebate of 25 per cent. on the published price, but not more than two copies can be sold to any Member unless ordered before printing.

Descriptions of new species may be published in the ' Bulletin,' although such were not communicated at the Meeting of the Club. This shall be done at the discretion of the Editor and so long as the publication of the ' Bulletin ' is not unduly delayed thereby.

Any person speaking at a Meeting of the Club shall be allowed subsequently—subject to the discretion of the Editor—to amplify his remarks in the ' Bulletin,' but no fresh matter shall be incorporated with such remarks.

XI. No communication, the whole or any important part of which has already been published elsewhere, shall be eligible for publication in the ' Bulletin,' except at the discretion of the Editor ; and no communication made to the Club may be subsequently published elsewhere without the written sanction of the Editor.

Alteration and Repeal of Rules.

XII. Any suggested alteration or repeal of a standing rule shall be submitted to Members to be voted upon at a General Meeting convened for that purpose.

COMMITTEE, 1942–1943.

Dr. A. Landsborough Thomson, *Chairman* (elected 1938).
Captain C. H. B. Grant, *Vice-Chairman* (elected 1940).
Mr. B. W. Tucker, *Vice-Chairman* (elected 1940).
Dr. G. Carmichael Low, *Editor* (elected 1940).
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Miss Phyllis Barclay-Smith (elected 1940).
Mr. B. G. Harrison (elected 1940).
Mr. James Fisher (elected 1942).
Mrs. Winifred Boyd Watt (elected 1942).

Officers of the British Ornithologists' Club, Past and Present.

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Lord Rothschild, F.R.S.	1913–1918.
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Dr. A. Landsborough Thomson.	1938–

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H. F. Witherby.	1932–1933.
G. M. Mathews.	1933–1934.
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Captain C. H. B. Grant.	1940–
Mr. W. B. Tucker.	1940–

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Dr. G. Carmichael Low.	1940–

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C. W. Mackworth-Praed.	1929–1935.

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Workman, William Hughes : Lismore, Windsor Avenue, Belfast.

Worms, Charles de ; Milton Park, Egham, Surrey.

130 Yamashina, The Marquis ; 49 Minami Hiradei, Shikuya-ku, Tokio, Japan.

Total number of Members.... 130

NOTICE.

[Members are specially requested to keep the Hon. Secretary informed of any changes in their addresses, and those residing abroad should give early notification of coming home on leave.]

LIST OF AUTHORS

AND OTHER PERSONS REFERRED TO.

Page

ACCOUNTS, STATEMENT OF 3

ANNUAL GENERAL MEETING 1

BANNERMAN, Dr. D. A.

A new race of Brown-capped Weaver (*Phormoplectes insignis okuensis*) from the Cameroon highlands 64–65

On the Races of *Onychognathus morio* 67–68

Remarks on " Physiological Races " 77–78

BENSON, C. W. (See N. B. KINNEAR.)

Notes on a recent tour in southern Abyssinia, together with a new species *Hirundo megaensis* and ten new Races *Vinago waalia jubaensis*, *Anthus caffer australoabyssinicus*, *Mirafra pœcilosterna australoabyssinicus*, *Turdus tephronotus australoabyssinicus*, *Erythropygia leucoptera pallida*, *Zosterops senegalensis australoabyssinicus*, *Anthreptes collaris djamdjamensis*, *Passer griseus tertale*, *Passer griseus jubaensis* and *Pseudonigrita arnaudi australoabyssinicus* 8–19

BUXTON, Major A.

Showed a series of slides and films 62

CLANCEY, P. A.

A melanistic Example of the Great Tit 6

A new Race of Meadow-Pipit *Anthus pratensis whistleri* from Northern Scotland 6

A Race of Greenfinch 7

On the Validity of *Alauda arvensis scotica* 39–41

A new Race of Rock-Pipit (*Anthus spinoletta ponens*) from France 41–42

A new Race of Tree-Creeper (*Certhia familiaris meinertzhageni*) from S.W. Ireland 42

The Occurrence of *Fringilla c. cœlebs* and *Turdus ericetorum catherinæ* in Wiltshire 42

On the exact Type-locality of *Sitta europæa affinis* 56–57

The Continental Chaffinch in Wiltshire 57

Some Supplementary Notes on *Emberiza citrinella caliginosa* 57

Clancey, P. A. (*cont.*). Page

A new race of the Greenfinch (*Chloris chloris restricta*) from the British Isles 65–66

A new race of Coal Tit (*Parus ater pinicolus*) from Northern Scotland 66–67

The Subspecific Status of Northern Scottish *Fringilla cœlebs* 71

On the race of *Regulus regulus* occurring in Sutherlandshire 71

Committee for 1942–1943 4

Grant, Captain C. H. B., and Lt.-Colonel C. W. Mackworth-Praed.

A new Race of Violet-backed Starling *Cinnyricinclus leucogaster arabicus* from Arabia 7

Notes on East African Birds :—

1. On the Races of *Pogoniulus p. pusillus* 19–20
2. On the Relationship of *Hirundo r. rustica* and *H. angolensis* 20–21
3. On the status of *Lanius somalicus mauritii* 21
4. Extension of Distribution of *Lanius mackinnoni* 21–22
5. On the Type-locality of *Corvinella affinis* 22
6. On the Distribution of the Races of *Laniarius r. ruficeps* 22–23
7. On the Status of *Laniarius ruficeps nuchalis* 23
8. On the Races of *Tchagra a. australis* 23–24
9. On the Colour Phases of *Chlorophoneus nigrifrons* 24–26
10. On the Status of *Malaconotus poliocephalus* and *M. hypopyrrhus* ... 26–28

Notes on Eastern African Birds :—

1. On the Status of *Merops persicus erythræus* 43
2. On the Status of *Parus afer parvirostris* 43
3. On the Relationship of *Parus niger* and *P. insignis* 44–45
4. On the Status of *Parus niger purpurascens* 45
5. On the Races of *Anthoscopus caroli* and *A. roccatii* 45–46
6. On the Type-locality of *Oriolus monacha* 47
7. On the Type-locality of *Corvultur albicollis* 47

Notes on Eastern African Birds :—

1. On the Races of *Tchagra senegalus* 49–50
2. On the Races of *Oriolus monacha* 51–52
3. On the Characters of *Corvus edithæ* 52–53
4. On the Status of *Pyrrhocorax p. docilis* 54
5. On the Races of *Onychognathus morio* 54–55
6. On the Status of *Spreo pulcher rufiventris* 55–56

Extension of Distribution of *Heteropsar acuticaudus* 58

A new Race of Sunbird, *Cyanomitra verticalis bannermani*, from the Southern Belgian Congo 63

Notes on Eastern African Birds :—

1. On the Relationship, Status and Distribution of *Egretta garzetta* and *Egretta gularis* 68–69
2. On the Races of *Onychognathus morio* 69
3. On the Distribution of *Zosterops pallida* 69–70
4. Extension of Distribution of *Cinnyris oustaleti* 70–71

Page

Kinnear, N. B.
A recently described Genus and Species of Bird from Southern Abyssinia, on behalf of Mr. C. W. Benson 7

Low, Dr. Carmichael
Exhibition of a Photograph of a Royal Albatross, on behalf of Count Wodzicki 5
Exhibition of an Andean Gull 5
Remarks on " Physiological Races " 76–77

Mackworth-Praed, Lt.-Colonel C. W. (See under Grant, Captain C. H. B.)

Meeting, Annual General 1

Meinertzhagen, Colonel R.
Remarks on " Physiological Races " 78–80

Moreau, R. E. Correction to previous Bull. B. O. C., lxii. p. 42, 1942 ... 28

Sparrow, Col. R.
On the Breeding Habits of *Hirundo atrocærulea* 72

Thomson, Dr. A. Landsborough.
Discussion on " Physiological Races " 73–75

Tucker, B. W.
Some Ornithological Trips on the Continent 29–31
Correction to Mr. B. W. Tucker's paper, *antea*, p. 29 59

Van Someren, Dr. V. G. L.
On the exact Type-locality of *Cisticola chiniana ukamba* 58
Letter to the Editor 58

Whistler, H.
A new Race of the Indian Red-billed Leiothrix (*Leiothrix lutea kumaiensis*) from the United Provinces 62

White, C. M. N.
A new Race of Green Pigeon (*Vinago australis clayi*) from Northern Rhodesia 63–64

Witherby, H. F.
A Note on the Scottish Sky-Lark 67
Remarks on " Physiological Races " 75–76

Wodzicki, Count. (See Dr. Carmichael Low.)
Observations on the Avifauna and Ornithological Work in New Zealand 31–39

BULLETIN

27 PURCHASED

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCCXLIV.

ANNUAL GENERAL MEETING.

Chairman : Dr. A. Landsborough Thomson.

This was held at the Rembrandt Hotel at 2.30 p.m. on Saturday, October 24, 1942, preceded by a luncheon at 1.30 p.m. ; 20 Members present.

(1) The Minutes of the last Annual General Meeting, held at the Rembrandt Hotel on Saturday, October 18, 1941, which had been published in the' Bulletin ' (lxii. 1941, pp. 1–4), were confirmed and signed.

(2) Mr. N. B. Kinnear, the Honorary Secretary, read his report for the past Session, 1941–42.

He regretted to say that this showed a further decrease in membership (144 to 137). The following three members had died : Dr. Casey Wood, Charles Oldham and H. M. Wallis. Four members (H. D. Cunyngham, Miss J. M. Ferrier, Bertram Lloyd and K. B. Rooke) had resigned. No new members had joined the Club.

Owing to the prevailing war conditions there had only been five meetings of the Club, these having been held on Saturday afternoons in October, December, February, April and June. The attendance had been quite satisfactory, and better than in the Session 1940–41 (142 in place of 110), this being made up as follows : 96 Members of the Club, 9 Members of the B. O. U., 1 Guest of the Club and 36 other Guests, a total of 142.

(3) Major A. G. Lambart Sladen, the Honorary Treasurer, sent his Annual Report and Financial Statement for the year ended August 31, 1942.

In submitting the accounts for the 12 months ended August 31, 1942, he said :—

I think members may be well satisfied that the financial position of the Club is so satisfactory in all the difficulties created by present circumstances.

This is due very largely to the loyalty and support of members, who have continued their subscriptions in spite of the increasing financial burdens which are common to all of us.

There is an increase in the Bank Balance, and no liabilities relative to the period under review remain outstanding. No account has been taken of the appreciation in value of National Savings Certificates or 3½% War Loan, which, it will be noted, are taken at cost.

During the past year increased difficulties have arisen with regard to correspondence with foreign members, and, of course, it has been impossible to communicate with or receive subscriptions from those of our members who are in Axis countries or enemy occupied territory.

The Balance Sheet will, as usual, be printed in, and issued with, the coming number of the 'Bulletin' (see opposite page).

Major Sladen, in a covering letter accompanying his report, said he wished to resign from the Treasurership, a post which he had held since 1936. He said that it was with great regret that he found himself compelled to relinquish this very interesting post, but in the circumstances had no alternative. The members, in accepting his resignation, wished it to be put on record how much the Club owed to him for the valuable work he had done in the past, especially for keeping the financial affairs of the Club going in the difficult times we were passing through.

(4) Election of Officers.

Acting on the resolution passed at the Annual General Meeting, Saturday, October 18, 1941, "That the provision of Rule I. as regards non-eligibility for immediate re-election to office be suspended during the war", the Committee recommend that the Chairman (Dr. A. Landsborough Thomson) and Vice-Chairmen (Captain C. H. B. Grant and Mr. W. B. Tucker) be re-elected for a further year.

The Committee also recommend that the Hon. Secretary (Mr. N. B. Kinnear) be re-elected and that Miss E. P. Leach be elected Hon. Treasurer in place of Major A. G. L. Sladen, who wishes to retire; that Mr. James Fisher be elected to the Committee in place of Mr. H. J. R. Pease, retiring through seniority, and that Mrs. Winifred Boyd Watt also be elected to the Committee to replace Miss Leach on her appointment as Hon. Treasurer.

The Meeting unanimously adopted these proposals.

Financial Statement for the 12 *months ended August* 31, 1942.

12 months ended August 31, 1941.									
£	s.	d.		£	s.	d.	£	s.	d.
			To Balance in Hand, September 1, 1941 :—						
118	13	1	Cash at Bank, Current a/c ..	189	2	6			
1	10	7	Do. Deposit a/c ..	1	10	7			
400	0	0	500 National Savings Certificates at cost, held by Bank	400	0	0			
255	13	4	£256 14 1 3½% War Loan .	255	13	4			
–	9	3	Cash in hands of Treasurer .	1	10	10			
							847	17	3
776	6	3							
135	8	0	,, Subscriptions of 115 Members	120	15	0			
			,, Subscription of 1 Member ..	1	0	0			
3	3	0	,, Subscriptions in Arrear	4	4	0			
3	1	0	,, Subscriptions in Advance ...	1	1	0			
							127	0	0
34	14	1	,, Sales of 'Bulletin'	....			27	0	8
8	19	8	,, War Loan Interest	....			8	19	8
£961	12	0					£1010	17	7

12 months ended August 31, 1941.									
£	s.	d.		£	s.	d.	£	s.	d.
			By Printing and Distribution of						
85	0	2	Publications and 'Bulletin'.				98	7	11
			,, H. B. Usher for compiling Index and List of Authors						
6	7	1	to 'Bulletin'				6	7	3
			,, Hire of Lantern and Cine at						
1	15	0	Meetings.....				6	13	0
			,, Zoological Society, Contribution towards cost of 'Zoological Record'				10	10	0
10	10	0							
			,, Miscellaneous Expenditure, including Audit Fee, Printing,						
9	1	6	Stationery and Postages ...				8	11	5
			,, W. Headley Perrett, arranging seating at Luncheon ...				–	–	–
1	1	0							
			,, Balance in hand, August 31, 1942 :—						
189	2	6	Cash at Bank, Current a/c ..	222	15	10			
1	10	7	Do. Deposit a/c .	1	10	7			
400	0	0	500 National Savings Certificates at cost, held by Bank.	400	0	0			
255	13	4	£256 14 1 3½% War Loan .	255	13	4			
1	10	10	Cash in Hands of Treasurer .	–	8	3			
							880	8	0
£961	12	0					£1010	17	7

A. G. L. SLADEN, *Hon. Treasurer.*

We ahve examined the foregoing Account with the Books and Vouchers of the British Ornithologists' Club for the year ended August 31, 1942, and certify it to be in accordance therewith. We have also verified the Cash at Bank and the holding of National Savings Certificates and 3½% War Loan.

224 Regent Street, London, W. 1.
September 9, 1942.

W. B. KEEN & CO.,
Chartered Accountants.

(5) Arrangements for Session.

It was agreed to have meetings similar to those of last Session where possible, and the possibility of having evening meetings in the summer months was also suggested, the dates of these meetings to be decided by the Officers of the Club. Due notice of such decisions would be forwarded to the members from time to time.

(6) Under any other business Dr. Norman May brought up the question as to whether Japanese members of the Club should be removed.

Dr. Carmichael Low reported what the Committee of the British Ornithologists' Union had decided to recommend to the Annual General Meeting, which would be held some time next year.

After discussion by some of the members present the matter was left *sub judice* for the moment.

This concluded the business.

Committee, 1942–43.

Dr. A. Landsborough Thomson, *Chairman* (elected 1938).
Captain C. H. B. Grant, *Vice-Chairman* (elected 1940).
Mr. B. W. Tucker, *Vice-Chairman* (elected 1940).
Dr. G. Carmichael Low, *Editor* (elected 1940).
Mr. N. B. Kinnear, *Hon. Secretary* (elected 1940).
Miss E. P. Leach, *Hon. Treasurer* (elected 1942).
Miss Phyllis Barclay-Smith (elected 1940).
Mr. B. G. Harrison (elected 1940).
Mr. James Fisher (elected 1942).
Mrs. Winifred Boyd Watt (elected 1942).

ORDINARY MEETING.

The four-hundred-and-thirty-ninth Meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, S.W. 7, on Saturday, October 24, 1942, immediately after the Annual General Meeting at 2.30 p.m.

Chairman : Dr. A. Landsborough Thomson.

Members present :—Miss P. Barclay-Smith ; Miss M. G. Best ; J. Fisher ; Captain C. H. B. Grant (*Vice-Chairman*) ; B. G. Harrison ; N. B. Kinnear (*Hon. Sec.*) ; D. Lack ; Miss E. P. Leach ; Dr. G. Carmichael Low (*Editor*) ; Dr. P. R. Lowe ; J. D. Macdonald ; Dr. W. N. May ; Mrs. J. B. Priestley ; Miss G. M. Rhodes ; W. L. Sclater ; D. Seth-Smith ; B. W. Tucker (*Vice-Chairman*) ; H. Whistler ; H. F. Witherby.

Guests :—Miss E. S. Barclay-Smith ; Miss L. P. Grant ; Miss A. Lightfoot ; G. E. Lodge ; Miss B. N. Solly ; Mrs. H. F. Witherby.

Members, 20 ; Guests, 6. Total, 26.

Exhibition of a Photograph of a Royal Albatross.

Dr. Carmichael Low read a letter from Count Wodzicki, now Consul-General for Poland in Wellington, New Zealand, sending his kindest regards to the Chairman and members of the Club. Count Wodzicki, members will remember, lunched with the Club as our guest on Saturday, December 7, 1940. With his letter he also sent an excellent photograph of a Royal Albatross with a three-weeks-old chick taken at Taiaroa Head, situated on the most northerly tip of the Otago Peninsula overlooking the entrance to the harbour. He thought this would interest members.

The Royal Albatross, which used to be known as *Diomedea regia*, is now known as *Diomedea epomophora sanfordi*, and belongs to the Chatham Island race and not to the Auckland and Campbell Islands one.

Under the heading " A Royal Albatross nesting on the Otago Peninsula, New Zealand ", L. E. Richdale ('Emu', xxxviii. 1939, pp. 467–488, and xli. 1942, pp. 169–184 and 253–264) gives an excellent account of the breeding biology and other habits of this interesting bird.

In concluding these papers Richdale places on record the splendid part played by the Otago Harbour Board for the protection of these birds. A most effective fence has been placed across the headland some distance back from the nesting area, and at the same time Parliament passed the Otago Harbour Empowering Bill, which has enabled the Board to frame a bye-law rendering liable to a heavy penalty any person caught on the Albatross reserve without authority. That this was necessary is indicated by the fact that vandals stoned the birds in November 1938.

Exhibition of an Andean Gull.

Dr. Carmichael Low exhibited a specimen of the Andean Gull (*Larus serranus* Tschudi). The history of the bird, he said, was interesting.

Mr. Alastair Morrison got three specimens of this Gull at Huancavelica, Peru, in the later end of 1937 (Ibis, 1939, p. 463) and brought them home to England, where they were presented to the Zoological Gardens on June 21, 1938. Two of these died, but the third one, a female, lived till October 6, 1942, *e. g.*, a little over four years. It died eventually of congestion and oedema of the lungs, and he, Dr. Carmichael Low, got the body, which he was presenting to the British Museum (Natural History). These Gulls inhabit the lakes of the high ranges of the Andes in summer, where they breed, and some of them go down to the coast in winter. They resemble our Black-headed Gull (*Larus ridibundus*) in getting a black head in summer, the black, Col. Hamerton says, going down to the nape of the neck ; in winter they lose this colour, the head becoming grey, with some dark streaks.

Dr. Carmichael Low showed three exhibits for Mr. P. A. Clancey, who was unable to be present himself.

(1) A Melanistic Example of the Great Tit.

Mr. P. A. Clancey sent the following note on a melanistic example of the Great Tit, *Parus major newtoni* Prazak :—

Dr. J. M. Harrison and P. Pateff (Ibis, 1937, p. 603) describe in detail an erythristic female *Parus major* collected on the island of Samothraki on May 19, 1935.

As such aberrations appear to be decidedly scarce in this species, I think it advisable to record the collecting of a melanistic female specimen near Carmunnock, Lanarkshire, S.W. Scotland, on October 16, 1942. In this bird the under-surface is pale cream in colour, as opposed to rich yellow in a typical example, and is washed with black pigment on the breasts and flanks. The general tone is extremely dull throughout, and the crown lacks the usual lustre.

I concur with Harrison and Pateff that such aberrations should be carefully recorded—their description as new geographical races can only lead to endless confusion.

(2) A new Race of Meadow-Pipit.

Mr. P. A. Clancey sent what he considers to be a new race of *Anthus pratensis* (L.) for exhibition.

Anthus pratensis whistleri, subsp. nov.

Description.—♂ and ♀, Autumn : Separable from *Anthus pratensis pratensis* (Linn.)—restricted type-locality : Sweden—on account of the darker and more heavily striated upper side, richer and more intensely spotted under-surface, and by having the wings and tail darker in tone (seven examined). *Breeding* : Scarcely separable from nominate form, but darker and more heavily marked in series (twelve examined; collected June, 1942). *Juvenile*: Striæ of upper side broader and darker than juvenile of *Anthus pratensis pratensis* (Linn.). General tone variable, but richer (three examined).

Range.—Northern Scotland. Birds from south-west Scotland form a promiscuous and intermediate population.

Type.—♂, 1st autumn. Collected near Dornoch, Sutherlandshire, northern Scotland, on September 2, 1938. A few bleached feathers of the juvenile plumage still retained. In my collection. Wing 83 mm.

Remarks.—C. M. N. White (' British Birds ', vol. xxxi. 1938, p. 231) refers to a very dark juvenile *Anthus pratensis* collected on North Uist, Outer Hebrides. I have seen none from the Outer Hebrides, but White considers that adults show no peculiar characteristics.

Named after Mr. Hugh Whistler—an ornithologist to whom I owe much.

(3) A Race of Greenfinch.

Mr. Clancey also sent for exhibition some skins of the Greenfinch, viz., the nominate race, *Chloris c. chloris*, and what he has described as *Chloris c. harrisoni* (Ibis, 1940, p. 92).

A recently described Genus and Species of Bird from Southern Abyssinia.

On behalf of Mr. C. W. Benson, Mr. N. B. Kinnear exhibited a specimen of *Zavattariornis stresemanni* Moltoni, from Southern Abyssinia, field-notes and remarks on which will be found in Mr. Benson's paper appearing in this number of the ' Bulletin ' (*vide* p. 9).

A new Race of Violet-backed Starling from Arabia.

Captain C. H. B. Grant and Lieut.-Colonel C. W. Mackworth-Praed exhibited and described the following new race :—

Cinnyricinclus leucogaster arabicus, subsp. nov.

Description.—The female differs from the female of *Cinnyricinclus l. leucogaster* (Gmelin) and *Cinnyricinclus l. verreauxi* Bocage in being duller above—earth-brown, not black—with feather-edging dull-coloured and sparse or entirely absent.

Distribution.—Eastern Sudan at Roseires, Abyssinia, French and British Somaliland and Arabia.

Type.—In the British Museum. Female adult. Hajeilah, Yemen, southern Arabia, April 17, 1913. Collected by G. W. Bury ; collector's no. 650. Brit. Mus. Reg. no. 1913.8.6.115.

Measurements of type.—Wing 106, culmen from base 19 ; tail 64 ; tarsus 23 mm.

Remarks.—The adult male is similar to that of *C. l. leucogaster*. The young male is similar to the adult female. Neither Sclater, Ibis, 1917, p. 140, nor Bates, Ibis, 1937, p. 792, make any comment on the Arabian birds. (Thirty specimens examined.)

Mr. C. W. Benson sent the following notes on a recent tour in southern Abyssinia :—

A new Species and Ten new Races from Southern Abyssinia.

General Introduction.

I have recently spent ten months in Southern Abyssinia, from June 1941 until March 1942. I was able to take with me my native collector and skinner, who had worked for me for eight years in Nyasaland. My duties as a Political Officer necessitated a considerable amount of travelling, and this, in conjunction with the keenness of my native assistant, enabled me to get together a very representative collection of over 2400 specimens. I spent most of the month of April 1942 on leave in Nairobi, and that time was largely spent in studying my collection with Dr. van Someren. Dr. van Someren put his magnificent collection of Kenya Colony, Uganda and Jubaland birds entirely at my disposal, and he devoted the whole of the time of my leave to collaborating with me.

Moreover, as the collection was gradually being built up, I was able to send to Dr. van Someren 200–300 birds at a time, and these were tentatively identified and an indication was given as to what species were of particular interest from the ecological and geographical point of view, and a point was made of securing sufficient comparative material. I am under a debt of deep gratitude to him, and the notes and descriptions of new birds which follow are based on his advice and wide experience. Dr. van Someren has allowed me to describe certain material from his Jubaland collection. My Southern Abyssinian collection will be kept by me in Africa until the war is over, when it is my intention to present it to the British Museum (Natural History).

Before dealing with the descriptions of the birds which appear to be new (one species and ten races), I take the opportunity to allude to certain other birds which, although previously known, were extremely rare and represented by very few specimens indeed.

Falco fasciinucha Reichw. & Neum., O. M. iii. 1895, p. 114 : Teita, Kenya Colony.

This bird was previously only known from two specimens, both taken in the Voi-Teita area. I secured three specimens at Yavello, thus extending its range for hundreds of miles to the northward.

Material collected.—Two males, wings 205, 208, tails 90, 86 mm. ; one female, wing 232, tail 102 mm.

A conspicuous feature of this bird is the very short tail, which does not extend as far as the wing-tips. Apart from colour differences, it is

at once distinguishable from *Falco cuvieri* in this respect. All three specimens were associated with a cliff about 300 ft. high among juniper-clad hills surrounding Yavello, at about 6000 ft. altitude.

Tauraco ruspolii Salvadori, Ann. Mus. Genova, (2) xvi. 1896, p. 44 : Lake Abbaia, Southern Abyssinia.

The type of this bird was unique. Five specimens (two males, two females and one unsexed) were obtained. They inhabited the extensive juniper woods with a dense evergreen undergrowth at Arero about 60 miles east of Yavello at about 6000 ft. They have been compared with the coloured plate (Pl. I., Ibis, 1913) and the re-description given by Salvadori (*op. cit.* pp. 1–2), and they agree very well with these. The sexes are alike in size and colour.

Zavattariornis stresemanni Moltoni, O. M. xlvi. 1938, p. 80 : Yavello.

Twenty specimens of this new genus and species were obtained from the type-locality. Nothing was recorded regarding its habitat and habits, and observations in these respects may be of interest. In the "thorn-acacia" country within a few miles of Yavello, to the north and south, it is very common. In the non-breeding season it goes about in parties of half a dozen. The call is a high-pitched "chek". It was found breeding in March, when many nests were seen. It is not colonial in its nesting. The normal site is at the top of a 20-ft. high thorn-tree. The nest is an untidy structure composed of thorn-twigs about 1 ft. long and 20 mm. thick. It is roughly globular in shape, with an external diameter of about 2 ft. Inside is a globular chamber of about 1 ft. in diameter ; on the floor of this is a mixture of dung and short pieces of dry grass. The entrance to the chamber is from the top, and this is protected by a vertical tubular tunnel of about 6 in. in height, 12 in. in outside diameter, but with internal diameter of not more than 3 in. This superstructure is added to the body of the nest just before the eggs are laid. The general appearance of a completed nest is of a vertical cylinder tapering towards the top, with the entrance tunnel at the summit.

Several clutches of eggs were taken. The largest clutch of six held embryos of equal development and can be taken as complete. The eggs are cream-coloured, with blotches of pale lilac, the markings being especially plentiful, and in the form of a ring toward the larger end. They are slightly glossy and smooth in texture. An average measurement is 27 by 20 mm. It was normal to observe three birds emerge from a single nest, but there is no evidence from the clutches to suggest that more than one female was responsible for the eggs.

The foregoing field-notes may suggest affinity of *Zavattariornis* with the Sturnidæ, though, on the other hand, the rather long bill with curved culmen, the rictal bristles extending well over the nostrils and the bare area around the eye, which in fresh specimens is bright blue in colour, fading in twenty-four hours to blackish, and the general scutation of the tarsus, suggest that Moltoni was correct in placing the bird among the Corvidæ. Specimens of the Mallophaga have been submitted to Mr. G. H. E. Hopkins for report. It will be of interest to know if they resemble those of the Sturnidæ rather than Corvidæ, or *vice versa*.

Francolinus coqui maharao Sclater, Bull. B. O. C. xlviii. 1927, p. 51 : Dugata Sasabin, 4000 ft., Southern Abyssinia.

Previously known from the type, a single male. This very well-marked race was plentiful in the open short-grassed plains at 4000 to 4500 ft. between Yavello and Mega. A long series of adults and young was taken.

Pseudalæmon fremantlii (Phillips) ; Calandrella sp. ; and Aëthocorys personata (Sharpe).

Examples of the above three species were collected in the short-grassed plains between Yavello and Mega. The first two have been compared with *Pseudalæmon delamerei* Sharpe and *Calandrella athensis* (Sharpe) respectively. They differ markedly. The former is possibly similar to the nominotypical *P. fremantlii*, which is a rare bird in collections. *Aëthocorys personata* is equally rare and is quite different to the Kenya Colony race *Aë. p. intensa* Rothschild, Bull. B. O. C. li. 1931, p. 100, from the northern Guasso Nyiro.

Hirundo megaensis, sp. nov.

Description.—Nearest to *Hirundo leucosoma* Swainson, Bds. W. Afr. ii. 1837, p. 74 : West Africa, in general scheme of plumage, but at once distinguishable by the absence of the white line in the wing and the different tail-pattern.

Adult male.—The whole of the upper surface from front to upper tail-coverts, including the wings, steely blue. Ear-coverts, side of neck, and a small patch on either side of the breast the same colour. Whole of under-surface from chin to under tail-coverts, including under wing-coverts and axillaries, pure white. Tail moderately forked, the difference between the central feathers and the elongated ones about 20 mm. ; outer tail-feathers abruptly attenuated, blue-black on outer web to tip, with a large area of white on the inner web ; penultimate pair less blue-

black on outer web, and on the inner web this colour extends for about 3 mm. from the tip ; next pair only slightly greyish towards tip of outer web ; remainder of tail-feathers white with black shaft-streaks running almost from tip to base. In other words, the tail expanded exhibits a white triangle, apex toward base of tail, outlined on either side by blue-black.

Adult female.—Differs from the male in being much less strongly blue, with the white on the tail limited to a large white area on the inner web of each feather toward the distal half, the tip being dark. Central pair bluish-grey toward centre, whitish at margins.

Sub-adult.—Three males are very similar to the adult female and have the same tail-pattern. No sub-adult females available.

Nestling plumage.—Duller and less blue-glossed on upper side than adult female or sub-adult male. The amount of white on the tail is restricted to a subterminal patch on the inner web, of about 10 mm. in length.

Distribution.—The open short-grassed country with scattered low bush between Yavello and Mega in Southern Abyssinia, at about 4000–4500 ft. Also extending to about 30 miles north of Yavello and about 30 miles south-east of Mega, toward the Kenya-Abyssinia frontier, in the same general type of country and at the same elevation. South of Mega and Moyale there is a sharp escarpment, and the general elevation drops to 3000 ft. ; the bird appears to be entirely absent from this lower country.

Type.—Adult male. 10 miles north of Mèga, Southern Abyssinia, at 4000 ft., September 10, 1941. Collected by C. W. Benson ; collector's no. E.833. Measurements of type : wing 100, tail 158 mm.

Remarks.—This new Swallow appears to have a very limited distribution, which no doubt accounts for it not having been previously discovered. In this restricted area it is, however, common. The large amount of white in the tail of the adult male is a very conspicuous feature when in flight. Whereas *Hirundo leucosoma* is stated to be associated with human dwellings and nesting therein (*cf.* Bds. Trop. W. Afr. v. p. 246), this is not so with *H. megaensis* ; there are no buildings in its habitat. I suspect that it nests in holes in the tall chimney-shaped ant-hills which are common in the area, but I have been unable to prove this. It probably breeds in January–February, as a specimen taken in March showed no ossification of the skull. No call-note is recorded.

Three adult males, including the type, were collected, also two adult females, three sub-adult males and two females and one male in nestling plumage.

(1) **Vinago waalia jubaensis,** subsp. nov.

Description.—Differs from *Vinago waalia waalia* (Meyer), Syst. Sum. Uebers. Zool. Entdeck. 1793, p. 128 : Tcherkin, near Lake Tsana, as follows :—Head and neck darker grey, mantle olive-green with a brownish-gold tinge, thus less bright ; "shouldér-patch" more reddish, less purplish ; grey of the breast darker ; belly a duller yellow, dull chrome as compared to a brighter lemon-chrome. Size smaller, *vide* measurements below.

Distribution.—Upper reaches of the Juba River at Unsi, Beila and Mandera, at 1000 ft.

Type.—Male. Beila, Juba River, Jubaland, January 1923. Collected by Dr. van Someren and in his private collection. Measurements of type : wing 171, tail 94, tarsus 24, culmen from base 20 mm.

Remarks.—Five specimens in Dr. van Someren's collection, from the localities cited, have been compared with four from Southern Abyssinia (Yavello, Burgi and Arero) collected by C. W. Benson. The colour differences described above are striking. Dr. van Someren had long ago noted the differences (J. E. A. & U. N. H. Soc. no. 35, 1930), but owing to poor northern material had not described the race.

Wing-measurements of Juba birds : males, 170–171 ; females, 168, 172, 173 mm. Southern Abyssinian birds : males, 175, 179, 181 mm. ; one female, 171 mm.

(2) **Anthus caffer australoabyssinicus**, subsp. nov.

Description.—Differs from *A. c. blayneyi* van Someren (Bull. B. O. C. xl. 1919, p. 56 : Olgerei, Kenya Colony) in that the spotting of the chest, though diminishing in size, is carried well up the throat, almost on to the chin. Thus the white area of the throat is reduced to a minimum, whereas in *A. c. blayneyi* the white throat is a conspicuous feature.

Distribution.—Only so far known from 30 miles south of Yavello, Southern Abyssinia, 10–15 miles north of Yavello, and 10 miles north of Mega, at 4500–5000 ft., in arid, park-like acacia country.

Type.—Male. 30 miles south of Yavello, 4500 ft., September 12, 1941. C. W. Benson ; collector's no. E.841. Measurements : wing 70, tail 49 mm.

Remarks.—In addition to the type, five other males and three females were collected. These give measurements as follows :—Five males, wings 66–69, tails 44–47 mm. ; three females, wings 65–67, tails 43–44 mm. Compared with five examples of *A. c. blayneyi* from southern Kenya Colony, three in Dr. van Someren's private collection and two in his collection in the Coryndon Museum. In one sub-adult of these five the spotting is present as in my birds, but this is a character of immaturity

and it is entirely lacking in the other four specimens, which include a breeding male and female, while in *A. c. australoabyssinicus* it is a character of the adult.

The range of *A. c. blayneyi* is from the Southern Masai Reserve eastward to the Ukamba country to west of the Tana River.

(3) **Mirafra pœcilosterna australoabyssinicus,** subsp. nov.

Description.—Differs from *M. p. pœcilosterna* Reichw., Orn. Centralb. 1879, p. 155 : Kibaraja, Tana River, Kenya Colony, in the much greyer tone of the upper side, with no rusty wash, while on the underside the ground-colour is whiter and the spotting of the breast more distinct. No comparison is needed with *M. p. massaica* Fisch. & Reichw., J. f. O. 1884, p. 55 : Klein Arusha, Tanganyika Territory, which is very strongly washed with rufous on the mantle and very dark rufous on the underside.

Distribution.—Only so far definitely known from the arid country at 3000 ft., 20–25 miles south of Mega, S. Abyssinia ; but other birds from Southern Abyssinia are probably referable to this race, *cf.* Sclater, Syst. Av. Æthiop. p. 317, who includes birds from this area in the nominotypical race.

Type.—Male. 20 miles south of Mega, S. Abyssinia, 3000 ft., February 15, 1942. Collected by C. W. Benson ; collector's no. E.2143. Measurements : wing 96, tail 68 mm.

Remarks.—In addition to the type, ten other specimens were taken, *i. e.*, eight males, one female and one sex undetermined. They have been compared with nine, including two topotypical, of *M. p. pœcilosterna* seven of *M. p. massaica* and six from the Upper Juba River (Serenli and Neboi). My birds resemble more closely these Juba birds, but they are darker grey on the mantle and crown and are larger : wings 88, 93 (2), 94 (2), 95 (2), 96 and 97 mm. ; female 89 mm., one unsexed 94 mm. Juba birds : four males 90 mm. (2), 92 mm. (2) ; two females 85 and 90 mm. In my series, birds taken in February, March and on June 1 had enlarged gonads.

(4) **Turdus tephronotus australoabyssinicus,** subsp. nov.

Description.—Differs from *T. tephronotus tephronotus* Cabanis, J. f. O. 1878, pp. 205–218 : Ndi, Teita district, Kenya Colony, in having the breast-band of a darker grey, less tinged with sandy ; the flanks and upper abdomen are richer orange-cinnamon ; the streaking on the throat is on the whole more pronounced ; the lower throat is usually more washed with ochreous, and the upper side is purer, darker grey.

Distribution.—Dense thorn bush at 3000–4500 ft. around Mega, Yavello and Arero, 60 miles east of Yavello, S. Abyssinia.

Type.—Male. Near Yavello, 4500 ft., January 14, 1942. Collected by C. W. Benson; collector's no. E.1836. Measurements of type: wing 107, tail 81 mm.

Remarks.—In addition to the type, seventeen other specimens were taken (thirteen males, two females and two juv. males in spotted dress). They have been compared with the following in Dr. van Someren's collection:—Three males and two females of topotypical *T. tephronotus*; four males and two females from the Juba River (Dolo, Neboi, Serenli and Mandera); and three males from Lamu and Manda Island. The two birds in the above series which most closely resemble mine are from Dolo and Neboi, localities which are, in fact, closest to areas from which mine were taken. The three birds from Lamu and Manda Island are the palest of any. Friedmann, in Bull. 153, U.S. Nat. Mus. 1937, p. 128, remarks that two birds from S. Abyssinia, taken in the same general area as mine, are somewhat darker on the sides and flanks than birds from Kenya, but a female from Dodoma is just as dark. But the fact that one can pick out one dark bird from Tanganyika Territory does not invalidate this new race in accordance with the 75 per cent. convention.

(5) **Erythropygia leucoptera pallida,** subsp. nov.

Description.—Crown paler grey and mantle much less rufous than in *E. leucoptera leucoptera* (Rüppell), Syst. Uebers. 1845, p. 38: Schoa, or *E. l. vulpina* Reichenow, J. f. O. 1891, p. 62: Ndi, Teita District, Kenya Colony. On the underside less rufous on the flanks, and streaking on the upper breast only slightly indicated in comparison with *E. l. leucoptera* and *E. l. vulpina*. This new race is also smaller, *vide post*.

Distribution.—The Juba River at and below 1000 ft. (Serenli, Neboi, Mandera).

Type.—Male. Serenli, Juba River, February 1923. Collected by Dr. van Someren, and is in his private collection. Measurement of type: wing 70, tail 66 mm.

Remarks.—The type and ten others in Dr. van Someren's collection have been compared with eight specimens taken by C. W. Benson near Yavello, Southern Abyssinia, which is comparatively close to the type-locality of *E. leucoptera leucoptera*, and these S. Abyssinian specimens are presumably referable to that race.

These Juba birds have also been compared with eight from the Northern Guasso River and Kerio River west of Rudolf, and with six topotypical *E. leucoptera vulpina*. The N. Guasso birds and those from West Rudolf are paler on the mantle than Southern Abyssinian birds, and represent an intermediate between the nominotypical race and *E. l. vulpina*.

Comparative wing-measurements :—

E. l. pallida.—Eight males, 68 mm. (3), 69 mm. (3), 69·5 mm., 70 mm. ; three females, 64·5 mm. (2), 65 mm.

E. l. leucoptera.—Five males, 71, 72, 73 mm. (3) ; two females, 68 and 73 mm. ; one (sex ?), 68 mm.

E. leucoptera intermediates (Northern Guasso, W. Rudolf).—Six males, 69, 70 mm. (2), 71 mm. (2), and 75 mm. ; one female, 66 mm. ; one juv. 66 mm.

E. l. vulpina.—Four males, 71 mm. (3), 76 mm. ; two females, 67 and 68 mm.

(6) **Zosterops senegalensis australoabyssinicus,** subsp. nov.

Description.—Differs from *Zosterops senegalensis jubaensis* Erlanger, Orn. Monatsb. ix. 1901, p. 182 : Domasso, Lower Juba River, in being greener above and brighter yellow below, and in the male the forehead is not so bright yellow. Differs from *Z. s. fricki* Mearns, Smith. Misc. Coll. lxi. no. 20, p. 7 : Bowlder Hill, Thika River, Kenya Colony, in lacking any greyish tinge to the green of the mantle.

Distribution.—Yavello and Arero, 60 miles east of Yavello, and surrounding country, Southern Abyssinia. Occurring both in arid thorn scrub at 4000 ft. and in juniper woods at 6000 ft.

Sclater, in Syst. Av. Æthiop. p. 673, records the distribution of *Z. s. jubaensis* as extending west to the Omo and Lake Stephanie, but birds from these localities are presumably referable to this new race.

Type.—Male. Near Yavello, S. Abyssinia, 6000 ft., July 26, 1941. Taken by C. W. Benson ; collector's no. E.516. Measurements of type : wing 55, tail 33·5 mm.

Remarks.—Sixteen specimens, as well as the type, were collected. Wing-measurements : males, 52, 54 mm. (3), 55 mm. (2), 56 mm. (2) ; females, 53 mm. (2), 54 mm. (2), 55 mm. (2), and two, sex undetermined, 54 and 55 mm.

They have been compared with three topotypical *Z. s. jubaensis* in Dr. van Someren's collection ; wings, two males 53 and 54 mm.; one female 52 mm.

Seven specimens from the coastal belt of Kenya which are nearest to *Z. s. jubaensis* also examined ; also six topotypical *Z. s. flavilateralis* Reichenow, J. f. O. 1892, p. 193 : Ndi, Teita, Kenya Colony, and seven topotypical *Z. s. fricki*.

Sclater, in 'Systema Avium Æthiopicarum', regards *Z. s. fricki* as a synonym of *Z. s. flavilateralis*, but *Z. s. fricki* has a greyish tinge to the mantle which is lacking in *Z. s. flavilateralis*, and is slightly paler yellow below. Friedmann, in Bull. 153, U.S. Nat. Mus. pt. 2, 1937. p. 369, also upholds *Z. s. fricki*.

(7) **Anthreptes collaris djamdjamensis,** subsp. nov.

Description.—Nearest to *Anthreptes collaris jubaensis* van Someren, J. E. A. & U. N. H. Soc. no. 37, 1931 p. 95: Hellescheid, Juba River, with which it agrees with regard to the bright canary-yellow of the underside in both the male and female, but the flanks are olive-tinged, a feature lacking in the Juba birds. The female of *A. c. djamdjamensis* also has a slight olive wash on the breast and lower throat; this is lacking in *A. c. jubaensis*. The mantle of both these races is bright grass-green without a yellow tinge, present in Kenya Colony races.

The male of *A. c. djamdjamensis* also appears to be a somewhat larger bird (wing-measurements of seven adult males 52·5, 53 mm. (5), 54 mm.; four adult females 48, 49, 51, 53 mm.; one adult male and one adult female of *A. c. jubaensis* give the following: 48 and 51 mm.).

A. c. garguensis Mearns, Proc. U.S. Nat. Mus. xlviii. 1915, p. 389: Mt. Garguess, N. Guasso Nyiro, Northern Frontier, Kenya Colony, is an altogether darker, less bright bird than *A. c. djamdjamensis*.

Distribution.—Southern Abyssinia, from Alghe (Agheremariam) at 6000 ft., south-east to the Daua Parma River between Yavello and Neghelli, at 3000 ft.; and south-west to the Sagan River between Yavello and Giarso, at 3000 ft. Habitat, dense overgreen scrub.

Type.—Breeding male. Alghe, S. Abyssinia, 6000 ft., September 22, 1941. Collected by C. W. Benson; collector's no. E.896.

Female type: same locality and collector. December 3, 1941. No. E.1462.

Measurements: wing 53, tail 36, exposed portion of culmen 13·5 mm. Female: wing 48, tail 32, exposed portion of culmen 13 mm.

Remarks.—My birds have been compared with the following in Dr. van Someren's collection:—

A. c. jubaensis, one male and one female.
A. c. garguensis, five males and one female.
A. c. elachior Mearns, Smith. Misc. Coll. lvi. 1910, no. 14, p. 5: Changamwe, near Mombasa, 23 males and 15 females.
A. c. ugandæ van Someren, Bull. B. O. C. xli. 1921, p. 113: Maraquet, Kenya Colony, nine males and six females.
A. c. teitensis van Someren, Bull. B. O. C. xli. 1921, p. 113: Teita, Kenya Colony, four males and three females.

All these races appear to be recognizable. It has been stated above that this new race appears to be somewhat larger than *A. c. jubaensis*. If a series of *A. c. jubaensis* were available for comparison it would probably be found that it is smaller than *A. c. djamdjamensis* in both sexes. In

working out my collection from Southern Abyssinia I have had to continually refer to Dr. van Someren's collection from the Juba River area at 1000 ft. and under, and it may be stated as a rule of wide application that the birds of this low-level area tend to run very small.

(8) **Passer griseus tertale,** subsp. nov.

Description.—Similar to *Passer griseus gongonensis* (Oustalet), 'Le Naturaliste', 1890, p. 274 : Gongoni, near Mombasa, but darker on the crown and mantle and darker grey on the throat and upper breast, and although possessing the same type of heavy bill, with curved culmen, the bill is definitely smaller. Distinguishable from *P. g. swainsonii* Rüppell, N. Wirbelt., Vög. 1840, p. 94, pl. 33 : "Abyssinia, Sennar, Kordofan", by the larger size, heavier bill and darker, purer brown mantle.

Distribution.—The neighbourhood of Gardulla and Tertale, the latter between Yavello and Giarso, at comparatively low elevations (*i. e.*, about 3000 ft.), Southern Abyssinia.

Type.—Male. 30 miles west of Yavello, Southern Abyssinia, 3000 ft., January 16, 1942. Collected by C. W. Benson ; collector's no. E.1865. Measurements of type : wing 98, tail 61, culmen, from base of skull, 17 mm.

Remarks.—The view here adopted is that *P. gongonensis* is conspecific with *P. griseus*, thus agreeing with van Someren in Nov. Zool. xxix. 1922, p. 168. If, on the other hand, *P. gongonensis* is regarded as a distinct species, then this new race would have to be known as *P. gongonensis tertale*. The position in the Yavello area of Southern Abyssinia is that in the higher country at 4500–5000 ft. at Yavello and Alghe (Agheremariam) we find *P. g. swainsonii* occurring, with wing-measurements of eight specimens collected as follows :—Four males, 83, 84, 86, 91 mm. ; four females, 80, 81, 82, 82 mm.

In the lower country at 3000–4000 ft. to the west of Yavello we find *P. griseus gongonensis*, with wing-measurements as follows :—Six males, 89, 90, 93, 98 mm. (3) ; one female, 93 mm. ; one (sex ?), 95 mm.

It will be observed from the foregoing figures that there is an overlap in size, which may be taken as evidence of intergradation. Moreover, the male with wing 91 mm. in the first group, from Alghe at 6000 ft., has bill very little less heavy than a male with wing 89 mm. in the second group, from 30 miles west of Yavello at 3000 ft. On the other hand, Dr. van Someren has at Kisumu in the immediate neighbourhood of the town collected both *P. griseus ugandæ* and a heavy-billed bird belonging to the *P. gongonensis* group.

My specimens of this new race have been compared with fourteen topotypical specimens of *P. griseus gongonensis* from the coastal strip of Kenya Colony. Apart from the bill-difference already cited, the coastal birds appear to be rather larger, wings 95–102 mm. in the male, 85–90 mm. in the female. I have also taken the opportunity to examine part of the material from the country between Ukamba and Lake Rudolf, referred to by van Someren in Nov. Zool. xxix. 1922, p. 168, as intermediate in point of size, including the bill, between *P. g. gongonensis* and *P. g. swainsonii*. There are nine of these birds still in Dr. van Someren's collection. They have less robust bills than in the case of topotypical *P. gongonensis*, and they (the bills of these birds) are only slightly heavier than are the bills of my series of *P. g. tertale*. They are thus intermediate between the Kenya Colony coastal and the Southern Abyssinian birds, as they are also geographically. Wing-measurements of these intermediate birds : male 90–95 mm. ; female 91–96 mm.

With regard to the bill-differences referred to above, although measurements do not adequately illustrate them, they are at once apparent to the eye.

Friedmann, in Bull. 153, U.S. Nat. Mus. part 2, Passeres, 1937, pp. 390–391, refers birds collected by the Childs-Frick expedition in Southern Abyssinia near Gardulla and Tertale to *P. gongonensis*, and Gardulla is, therefore, included above in the distribution of this new race.

(9) **Passer griseus jubaensis,** subsp. nov.

Description.—Differs from *P. griseus gongonensis* in its smaller bill (length and depth). Distinguishable from both *P. griseus gongonensis* and *P. g. tertale* by being paler below but more rufescent above on the mantle and rump.

Distribution.—Middle and upper waters of the Juba River, at below 1000 ft.

Type.—Male. Mandera, Juba River, October 1922. Collected by Dr. van Someren and in his private collection. Measurement of type : wing 96, tail 59, culmen from base 16 mm.

Remarks.—Seven specimens in Dr. van Someren's collection, in addition to the type. Wing-measurements : six males, 91, 93, 94, 95, 96, 97 mm.; one female, 88 mm. ; one, sex undetermined, 87 mm. These specimens are referred to by Dr. van Someren in J. E. A. & U. N. H. Soc. no. 35, March 1930, " Notes on birds from Jubaland and the Northern Frontier of Kenya Colony ", under the name *P. g. swainsonii*, and were said to be intermediate between *P. g. swainsonii* and *P. g. gongonensis*. This new race certainly belongs to the larger-billed *P. g. gongonensis* group.

(10) **Pseudonigrita arnaudi australoabyssinicus,** subsp. nov.

Description.—Differs from *P. arnaudi arnaudi* (Bonaparte), Consp. Gen. Av. i. 1850, p. 444 : White Nile, and *P. a. kapitensis* Mearns, Smith. Misc. Coll. lvi. 1910, no. 14, p. 5 : Juja Farm, Kapiti Plains, Kenya Colony—the latter synonymized by Sclater with *P. arnaudi arnaudi*, *vide* Syst. Av. Æthiop. p. 719, though recognized, on account of its larger size, by both van Someren, Nov. Zool. Tring, xxix. 1922, p. 146, and Friedmann, Bull. 153, U.S. Nat. Hist. Mus. pt. 2, 1937, p. 383, in that the crown is of a darker, more ashy-grey, and the mantle is darker, with an appearance of obscure mottling. The contrast between the crown and mantle is less marked in *P. a. australoabyssinicus* than in the other two races referred to.

Distribution.—Southern Abyssinia, between Mega and Yavello, at 4000–4500 ft., in " arid thorn-acacia " country.

Type.—Breeding male. Yavello, S. Abyssinia, June 15, 1941. Collected by C. W. Benson ; collector's no. E.100. Measurements of type : wing 66, tail 33 mm.

Remarks.—In addition to the type, four males, wings 65–66 mm., seven females, wings 64–66·5 mm., and one, sex undetermined, wing 64 mm., were collected. It is as well to emphasize that the slight degree of mottling already referred to is not indicative of immaturity, for most of the birds were in breeding condition.

My birds have been compared with ten, including seven topoptypical *P. a. kapitensis* and three *P. a. arnaudi*, from western Rudolf area in Dr. van Someren's collection.

This species does not appear to have been previously recorded from Southern Abyssinia.

Notes on Eastern African Birds.

Captain C. H. B. Grant and Lieut.-Colonel C. W. Mackworth-Praed sent the following ten notes :—

(1) On the Races of *Pogoniulus pusillus pusillus* (Dumont) occurring in Eastern Africa.

In the Bull. B. O. C. lviii. 1938, p. 140, we considered, on the evidence before us, that both *P. p. lollesheid* van Someren and *P. p. eupterus* Grote were synonyms of *P. p. affinis* (Reichenow).

In the O. M. 1939, p. 83, Grote gives his reasons for recognizing *P. p. eupterus* and for placing *P. p. lollesheid* as a synonym of *P. p. affinis*. He places *P. p. affinis* as a coastal race from southern Italian Somaliland to Tanganyika Territory with a wing of 46–52 mm., and *P. p. eupterus* as an inland race covering the Kilimanjaro area with a wing of 53–58 mm.

He quotes van Someren, J. E. A. & U. N. H. Soc. xiv. 1939, p. 41, who gives reasons for the recognition of *P. p. lollesheid* and who gives for Kipini specimens (the type-locality of *P. p. affinis*) the wing-measurement of 58 mm. (p. 42). Reichenow gives the wing of the type of *P. p. affinis* as 50 mm. and Grote gives it as 51 mm.

On the evidence as given by Grote his argument is clear, but, unfortunately, he does not give all the available evidence. The evidence before us is as follows :—

Wing : Juba River area, 46–50 ; Kipini, 51–58 ; Tana River, 50–53 ; Voi, 51–53 ; Dar-es-Salaam, 51–53 ; Kilimanjaro, 54–58 ; south-western Kenya Colony, 54–58 ; Ukerewe Island, 53–58 ; Chanlers Falls, 51 mm.

We therefore find that Kipini birds equal Ukerewe birds, and that therefore *P. p. eupterus* must be a synonym of *P. p. affinis*.

The evidence in support of *P. p. lollesheid* is better, and as van Someren has found that *P. p. affinis* has a wing up to 58 mm., from its type-locality, it does show that *P. p. lollesheid* is smaller than *P. p. affinis*. Therefore three races can be recognized in Eastern Africa, as follows :—

Pogoniulus pusillus uropygialis (Heugl.).

Barbatula uropygialis Heuglin, J. f. O. 1862, p. 37 : Ain Saba, Eritrea.

Mantle streaked yellow and black. Wing 53–59 mm.

Distribution.—Eritrea to south-central Abyssinia and western British Somaliland.

Pogoniulus pusillus affinis (Reichw.).

Barbatula affinis Reichenow, O. C. 1879, p. 114 : Kipini, mouth of Tana River, eastern Kenya Colony ; of which *Pogoniulus pusillus eupterus* Grote, O. M. 1928, p. 78 : Ukerewe Island, Lake Victoria, Tanganyika Territory, is a synonym.

Mantle streaked with black and white. Wing 50–58 mm.

Distribution.—South-western Abyssinia to Kenya Colony and Tanganyika Territory as far south as the Rufigi River.

Pogoniulus pusillus lollesheid (van Som.).

Barbatula pusillus lollesheid van Someren, Nov. Zool. xxxvii. 1932, p. 280 : Serenli, Juba River, southern Italian Somaliland.

Smaller than *P. p. affinis*. Wing 46–50 mm.

Distribution.—Juba River valley, southern Italian Somaliland.

(2) On the Relationship of *Hirundo rustica rustica* Linnæus and *Hirundo angolensis* Bocage.

In the Bull. B. O. C. lxii. 1942, p. 47, we have stated that *Hirundo angolensis* builds a nest similar to that of the European House-Martin,

i. e., attached to an overhanging projection, but not supported below; it is not closed in at the sides and top, and is an open cup nest. In a letter dated July 26, 1942, Captain C. R. S. Pitman has kindly informed us that he has " probably examined thousands of nests of *H. a. arcticincta*, and they have all been of the *Hirundo rustica* type ", *i. e.*, open cup-shaped nests placed on rafters or some similar support below.

All the nests examined by Captain C. H. B. Grant in western Tanganyika Territory were on European houses and were all attached to the walls directly beneath an overhang without support from below ; but it may be they were started on and attached below to a nail or some small projection which would not be visible unless the nest was removed.

It would therefore appear that *Hirundo angolensis* adapts its nest according to the situation available, *i. e.*, either with or without support from below, on rafters or ledges or attached to a perpendicular face in houses or caves.

(3) On the Status of *Lanius somalicus mauritii* Neumann, J. f. O. 1907, p. 595 : Karoli Mts., northern Kenya Colony.

Neumann in the original description gives grey, not black, shoulder-feathers, but this is a variable character found in all young and immature specimens of the typical race. Van Someren, Nov. Zool. xxix. 1922, p. 122, gives as characters : rump and upper tail-coverts white, and the under wing-coverts dark ashy grey. The lower rump is white in the typical race as well as the upper tail-coverts, and surely by " under wing-coverts " van Someren means the axillaries. In the typical race the axillaries are usually black in the adult, but occasionally grey, and in the immature and young bird they are grey. The immature bird is similar to the adult, but has the black of the head duller, axillaries ashy to blackish, bill not usually so deep a black, and often horn-coloured at base.

We find that the characters given for *L. s. mauritii* Neumann are not constant, and are of opinion that it must become a synonym of *Lanius somalicus* Hartlaub, Ibis, 1859, p. 342 : Bender Gam (Gaan), north-eastern British Somaliland.

(4) Extension of Distribution of *Lanius mackinnoni* Sharpe, Ibis, 1891, p. 444, pl. xiii. : Bugemaia, western Kenya Colony.

In a small collection made by R. H. Braun in Angola, and deposited in the British Museum, there is an adult male specimen of this Shrike, collected at Quicolungo, Cuanza district, northern Angola, on May 10, 1939 ; collector's no. 90. Sclater, Syst. Av. Æthiop. ii. 1930, p. 611,

gives the southern limit in Western Africa as Spanish Guinea, and Bannerman, Bds. Trop. W. Afr. v. 1939, p. 364, gives the southern limit as Gabon and the Mayombe district of the lower Congo. This is apparently a new record for Angola.

(5) On the Type-locality of *Corvinella affinis* Hartlaub, Syst. Orn. West Afr. 1857, p. 104.

Hartlaub states that he had a male specimen from Nubia and gives references to *Corvinella affinis* Heuglin, Syst. Uebers. Vög. N. Ostafr. 1856, p. 34 (Sitz. Kais. Akad. Wissensch. Wien, xix. 1856, p. 286) and Beitr. pl. 19, fig. 3. Heuglin gives Bahr-el-Abiad (White Nile), south of lat. 7° N.

In the Proc. Biol. Soc. Washington, xlvi. 1933, p. 121, Friedmann and Bowen correctly state that this bird is not found in Nubia, which was that part of the Sudan north of Khartoum. As this species does not occur in that area, Hartlaub's Nubia cannot be accepted as the type-locality, and we must take the next in order of priority. This is clearly Heuglin's, and, therefore, the correct type-locality for *Corvinella affinis* Hartlaub is White Nile, south of lat. 7° N., southern Sudan.

It should be remarked that apparently Heuglin's Beitr. pl. 19 was never published.

(6) On the Distribution of the Races of *Laniarius ruficeps ruficeps* (Shelley).

Sclater, in the Syst. Av. Æthiop. ii. 1930, p. 621, gives the distribution of the typical race from Burao in British Somaliland to the upper waters of the Juba River, and of *L. r. rufinuchalis* (Sharpe) as the western parts of Somaliland and in the Ogaden country. The distribution of the former to the Juba River is based on a specimen in the British Museum collection (Brit. Mus. Reg. no. 1898.12.11.20) which has no original label and bears in the late Mr. Thomas Wells's handwriting on a British Museum label, "Somaliland. A. E. Atkinson (C.), Lord Delamere (P.).", and in the late Dr. Bowdler Sharpe's handwriting, "*Telephonus ruficeps* Shelley (Lugh, Juba River)".

Dr. A. E. Atkinson travelled with Lord Delamere on his trip from Berbera to Lugh, and thence to Lake Rudolf and Kenya Colony in 1896–97, and specimens were collected at various localities along this route. This specimen of *L. ruficeps* does not agree with *L. r. rufinuchalis*, but agrees perfectly with the typical race, and, therefore, could not have come from Lugh, and must have been collected in British Somaliland.

The distribution of the three races is as follows :—

Laniarius ruficeps ruficeps (Shelley).

Dryoscopus ruficeps Shelley, Ibis, 1885, p. 402, pl. x. : Burao, British Somaliland.

Distribution.—British Somaliland.

Laniarius ruficeps rufinuchalis (Sharpe).

Dryoscopus rufinuchalis Sharpe, P. Z. S. 1896, p. 479 : Durro, Southern Abyssinia.

Distribution.—Southern Abyssinia and southern Italian Somaliland from Dabuli to El Wak and Bardera.

Laniarius ruficeps kismayensis (Erlanger).

Dryoscopus ruficeps kismayensis Erlanger, O. M. 1901, p. 182: Kismayu, Italian Somaliland; of which we consider *Laniarius ruficeps cooki* van Someren, Bull. B. O. C. xl. 1919, p. 23 : Tsavo, Kenya Colony, to be a synonym, although we have been unable to examine specimens.

Distribution.—Coastal area of southern Italian Somaliland and Kenya Colony from the Juba River to Taru.

(7) On the Status of *Laniarius ruficeps nuchalis* van Someren, Bull. B. O. C. xl. 1919, p. 23.

This name is presumably meant for *L. r. rufinuchalis* (Sharpe), but it has been introduced into nomenclature as *Laniarius ruficeps nuchalis* and must stand. It must be treated as a substitute name for *L. r. rufinuchalis* and be placed in the synonymy of that race.

(8) On the Races of *Tchagra australis australis* (Smith), Rep. Exp. C. Afr. 1836, p. 44 : north of Kurrichane, occurring in Eastern Africa.

Sclater, Syst. Av. Æthiop. ii. 1930, p. 626, recognizes four races in Eastern Africa, but remarks in a footnote that two of these are not satisfactory, and in Jackson's Bds. Kenya Colony & Uganda, iii. 1938, p. 1226, recognizes three races. Van Someren, Nov. Zool. xxix. 1922, p. 110, lists four races and gives the wing-measurement of his *Tchagra australis littoralis* as 63–73 mm., and in Nov. Zool. xxxvii. 1932, p. 304, disagrees with Sclater's footnote (p. 626), producing no evidence in support of this. Friedmann, Bull. 153, U.S. Nat. Mus. 1937, p. 287, recognizes three races. Van Someren, J. E. A. & U. N. H. Soc. xiv. 1939, p. 106, discusses his Chyulu Hills specimens, but gives no wing-measurements.

Examination of the series in the British Museum shows that individual variation has to be considered, and it is only on general characters that races can be recognized.

We have measured three coastal specimens from Gazi, Kenya Colony, and Dar-es-Salaam, Tanganyika Territory, *i. e.*, 70–75 mm. as compared with inland birds of 71–78 mm. The Gazi bird has a wing of 70 mm., the two Dar-es-Salaam specimens wing of 72 and 75 mm. This does not appear to support *T. a. littoralis*, and the other characters given are not constant. Lynes, J. f. O. 1934, p. 106, states that he compared his Iringa specimens with the type of *T. a. congener* ; but we can see no characters by which this race can be separated from *T. a. minor*.

We can therefore only recognize two races in Eastern Africa, as follows :—

Tchagra australis minor (Reichw.).

Telephonus minor Reichenow, J. f. O. 1887, p. 64 : Kagehi, Mwanza district, northern Tanganyika Territory ; of which *Pomatorhynchus australis congener* Reichenow, J. f. O. 1902, p. 258 : Songea district, south-western Tanganyika Territory ; *Telephonus australis dohertyi* Neumann, J. f. O. 1907, p. 370 : Escarpment, western Kenya Colony ; and *Harpolestes australis littoralis* van Someren, Bull. B. O. C. xli. 1921, p. 102 : Changamwe, south-eastern Kenya Colony, are synonyms.

Distribution.—Kenya Colony to Tanganyika Territory, Nyasaland, and Portuguese East Africa as far south as Inhambane. Wing 63–78 mm. Twenty-four specimens measured.

Tchagra australis emini (Reichw.).

Telephonus australis emini Reichenow, O. M. 1893, p. 60 : Bukoba, north-western Tanganyika Territory.

Darker brown above than *T. a. minor*. Wing 77–82 mm. Four specimens measured.

Distribution.—Southern Sudan, Uganda and north-western Tanganyika Territory.

(9) On the Colour Phases of *Chlorophoneus nigrifrons* (Reichenow).

Sclater, Syst. Av. Æthiop. ii. 1930, p. 633, gives four races, and places *C. münzneri* Reichenow as a race of *C. rubiginosus* (Sundevall), casting doubt on the validity of *C. elgeyuensis* van Someren.

Hartert, Nov. Zool. xxxiv. 1928, p. 210, places *C. elgeyuensis* as a " variety (mutation) " of *C. nigrifrons*, and says that the twenty-one specimens examined from Mt. Kenya vary from flame-scarlet or orange-scarlet to bright yellow with hardly an orange tinge, and that in fourteen specimens from Kiambu the variation is from yellow with only an orange tinge to orange-yellow. Bangs, Proc. New Engl. Zool. Club, xii. 1931, p. 70, recognizes five races, placing *C. abbotti* (Richmond) and *C. elgeyuensis* together as races of each other ; but suggests the alternative that they are colour phases. Boulton, Ann. Carnegie Mus. 1931, p. 56, rightly

points out that *C. münzneri* is not a race of *C. rubiginosus*, as the latter has white lores and a white superciliary streak ; and we may add that, although the bill in *C. r. rubiginosus* is practically the same size as in *C. münzneri*, in *C. r. bertrandi* (Shelley) it is appreciably larger. Bowen, Proc. Ac. Nat. Sci. Philad. lxxxiii. 1931, p. 66, records *C. nigrifrons* from Meru, north-east of Mt. Kenya ; Moreau, Bull. B. O. C. li. 1931, p. 111, states that *C. nigrifrons* and *C. rubiginosus* may be seen feeding in company, their voices are indistinguishable, and that the call of *C. nigrescens* is exactly like that of *C. nigrifrons* and *C. rubiginosus*. Moreau's reference to *C. rubiginosus* is no doubt to *C. münzneri*. Sclater and Moreau, Ibis, 1933, p. 201, state that on one occasion two *C. nigrescens* were seen together, and that the type-specimen was shot in company with a normal female of *C. nigrifrons*. Lynes, J. f. O. 1934, p. 107, places *C. münzneri* under *C. nigrifrons*, and records a male *C. nigrifrons* and a female *C. münzneri* as being in company, and although this was not accepted as absolute proof, he felt convinced that the one was no more than a mutation of the other. Vincent, Ibis, 1935, p. 755, recognizes five races, placing *C. abbotti*, *C. elgeyuensis* and *C. manningi* as races of each other. He supports *C. abbotti* as a species, as both this and *C. nigrifrons* occur side by side on Mt. Kilimanjaro, " and no specimens have been collected which could be said to show intergradation ". Vincent also places *C. sandgroundi* Bangs as a synonym of *C. manningi*, and on p. 757 considers that the relationship of *C. nigrescens*, if any, is confined to *C. nigrifrons*, and it is probable that *C. münzneri* is specifically distinct from *C. rubiginosus* and *C. bertrandi*.

Moreau, P. Z. S. 1935, p. 884, further discusses the relationship of these birds, and remarks that " it is noteworthy that no intermediate specimens have been obtained ". Zimmer, O. M. 1939, p. 46, places *C. münzneri* as a synonym of *C. nigrifrons*, and remarking on these birds in south-western Tanganyika Territory, says that two *C. nigrifrons* have not been seen together, but always both sexes of *C. münzneri* or a male of *C. nigrifrons* with a female *C. münzneri*. Moreau, Rev. Zool. Bot. Afr. 1939, p. 10, records *C. münzneri* from Kilimanjaro as taken in a tree which also contained birds of *C. nigrifrons* and *C. abbotti*.

Hartert, Bangs, Moreau, Lynes, Vincent and Zimmer all suggest the possibility of these birds being colour phases. Boulton and Vincent mention the specific distinction between *C. münzneri* and *C. rubiginosus*, and Vincent and Moreau both mention the fact that there are no intermediates.

We have examined the series in the British Museum collection and agree with those authors who have produced evidence in support of these seven forms being colour phases of each other ; and that *C. münzneri* has nothing to do with *C. rubiginosus*.

In the size and in the colour of the upper side the seven forms are exactly the same. Black, yellow and scarlet are well known to be interchangeable colours, and we find an analogous case in the underwing of the moth *Panaxia dominula* and the *Zygæna*, where the yellow and black are recessives. With this Shrike the black and yellow are probably recessives to the scarlet, as is also the coloration of the underparts of the form *C. münzneri*, and as they are not caused by a change in colour due to overlapping of areas, but are caused by a change of gene, each colour phase would be sharply defined and there could not be any intermediates. The yellow, orange-yellow and scarlet may be determined by three allelomorphic genes, or orange-yellow may be the heterozygote; whereas the black and pale forms are probably determined by different genes from each other and from the yellow, orange-yellow and scarlet genes. This being so, we find one form predominant in certain areas, as, for instance, the scarlet in Nyasaland and Southern Rhodesia, but the black form, *C. nigrescens*, has been found in two widely separated localities. In this form black covers the area of the chin and breast and has turned the yellow of the belly to green. In Kenya Colony and north-eastern Tanganyika Territory three colour phases occur together, but in what proportion is not definitely known, though the yellow appears to be predominant. It seems clear that all seven names apply to the same bird, and, therefore, *Chlorophoneus abbotti* (Richmond), *Chlorophoneus münzneri* Reichenow, *Chlorophoneus manningi* (Shelley), *Chlorophoneus elgeyuensis* van Someren, *Chlorophoneus sandgroundi* Bangs, and *Chlorophoneus nigrescens* Sclater are all synonyms of *Chlorophoneus nigrifrons nigrifrons* (Reichenow).

We have to thank Dr. E. A. Cockayne for information and advice on this question of colour phases.

(10) On the Status of *Malaconotus poliocephalus* (Lichtenstein) and *Malaconotus hypopyrrhus* Hartlaub.

Sclater, Syst. Av. Æthiop. ii. 1930, p. 636, recognizes four races. Van Someren, Nov. Zool. xxix. 1922, p. 121, places *Malaconotus catharoxanthus* Neumann as a race of *Malaconotus monteiri* (Sharpe), separates the yellow-breasted and saffron-breasted into two species, and doubtfully keeps *Malaconotus interpositus* Hartert as a species; and in Nov. Zool. xxxvii. 1932, p. 310, gives a valuable list of wing-measurements, but does not come to any definite conclusion.

Neumann, J. f. O. 1905, p. 226, recognizes six races and places *Malaconotus monteiri* (Sharpe) as a race of *Malaconotus poliocephalus* (Lichtenstein). Sclater, Jackson's Bds. Kenya Colony & Uganda, iii. 1938, p. 1238, places *Malaconotus catharoxanthus* Neumann as a synonym of

M. p. poliocephalus (Lichtenstein). Friedmann, Bull. 153, U.S. Nat. Mus. 1937, p. 307, follows Neumann, 1905. Van Someren, J. E. A. & U. N. H. Soc. xiv. 1939, p. 103, adds further suggestions to the systematics of this Shrike.

Our examination of the series in the British Museum shows that both the yellow-breasted and the saffron-breasted forms occur in northern Abyssinia, though the former are in the north, Garrat Mariam Tana-Gallabat road and Labalaba Marat Valley, and the latter in central and eastern Abyssinia. In the eastern and south-eastern Belgian Congo specimens are found with a slight, but distinct, wash of saffron on the breast, and from Elizabethville there are two males and one female, all breeding birds, one male having no trace of saffron below and the other male, as well as the female, having a saffron wash on the breast. Several specimens, also from the southern Sudan, have indications of saffron on the side of the chest and flanks.

Except for the saffron, or lack of it, on the underparts, there is no character for supporting a specific difference, and as we find the saffron colouring is not altogether absent from specimens as far west as the Belgian Congo, and at Elizabethville find both yellow-breasted and saffron-breasted in the same area, we are of opinion that they must be considered as colour phases; the yellow-breasted phase predominating in north-west Africa and the saffron-breasted phase predominating in south-eastern Africa. It is unfortunate that only one specimen was collected of the three breeding birds from Elizabethville, as it would have been most instructive to have known with which phase the yellow-breasted male was paired and with which phase the saffron-breasted male and female were respectively paired. All three were taken on different dates. This question could, however, be easily settled by anyone residing in an area where both colour phases occur.

Accepting the differences as colour phases, and not as specific or racial characters we can only recognize two races on general size, as follows :—

Malaconotus poliocephalus poliocephalus (Lichtenstein).

Lanius poliocephalus Lichtenstein, Verz. Doubl. 1823, p. 45 : Senegambia ; of which *Malaconotus catharoxanthus* Neumann, J. f. O. 1899, p. 391 : Bongo, Bahr-el-Ghazal, south-western Sudan ; *Malaconotus poliocephalus schoanus* Neumann, O. M. 1903 p. 89 : Ambukarra, southern Shoa, central Abyssinia; and *Malaconotus interpositus* Hartert, Bull. B. O. C. xxix. 1911, p. 36 : north-west of Lake Tanganyika, are synonyms.

With or without saffron on the underparts. Wing 116–132 mm. Sixteen specimens measured.

Distribution.—Gambia, Sierra Leone, Gold Coast, Nigeria and

Cameroon to the Sudan, Abyssinia, Uganda, British Somaliland, Angola, and eastern and south-eastern Belgian Congo.

MALACONOTUS POLIOCEPHALUS HYPOPYRRHUS Hartlaub.

Malaconotus hypopyrrhus Hartlaub, Verz. Brem. Samml. 1844, p. 61 : Durban, Natal, South Africa ; of which *Archolestes approximans* Cabanis, in von der Decken's Reise, iii. pt. i. 1869, p. 27 : Dalaon River (Daluni), north-east end of East Usambara Mts., north-eastern Tanganyika Territory, is a synonym.

Smaller than *M. p. poliocephalus*. Wing 105–118 mm. Seventy-one specimens measured.

Distribution.—Southern Italian Somaliland, Kenya Colony, Tanganyika Territory, Nyasaland to eastern Cape Colony and Natal.

Note.—The Turkana area, Meuressi and West Rudolf, from where van Someren gives wing-measurements of 110–125 mm., would appear to be the meeting-place of *M. p. poliocephalus* and *M. p. hypopyrrhus*.

Our examination of specimens of *Malaconotus monteiri* (Sharpe) and *Malaconotus lagdeni* (Sharpe) shows that both these are deeper billed than *Malaconotus poliocephalus* and are correctly treated as species by Sclater, Syst. Av. Æthiop. ii. 1930, pp. 636, 637. We have not been able to examine any specimens of *Malaconotus alius* Friedmann.

CORRECTION.

Mr. R. E. Moreau sent the following correction :—Vol. lxii. 1942, p. 42, last paragraph under "*Remarks*" should read : "I have been unable to examine specimens of *Bradypterus a. alfredi* Hartlaub, of which, apparently, only the type is known, but judging from its description its upper parts do not differ from those of *B. a. albicrissalis*, the type of which is in the British Museum".

27
PURCHASED

NOTICE.

The next Meeting of the Club will be held at the Rembrandt Hotel, Thurloe Place, S.W. 7, on Saturday, November 28, 1942, at 2 o'clock. This will be preceded by a luncheon at 1 o'clock.

AGENDA.

A paper entitled "Observations on the Avifauna and Ornithological Work of New Zealand", by Count K. WODZICKI (Consul-General for Poland in Wellington, New Zealand), will be read.

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

7 - MAY 1943
PURCHASED

No. CCCCXLV.

The four-hundred-and-fortieth Meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, S.W. 7, on Saturday, November 28, 1942, at 2 P.M.

Chairman : Mr. B. W. TUCKER.

Members present :—Dr. D. A. BANNERMAN ; J. FISHER ; P. A. D. HOLLOM ; N. B. KINNEAR (*Hon. Sec.*) ; D. LACK ; Miss E. P. LEACH (*Hon. Treas.*) ; Dr. G. CARMICHAEL LOW (*Editor*) ; Col. R. MEINERTZHAGEN ; T. H. NEWMAN ; Mrs. J. B. PRIESTLEY ; Miss G. M. RHODES ; W. L. SCLATER ; D. SETH-SMITH ; Dr. A. LANDSBOROUGH THOMSON ; H. F. WITHERBY.

Guests :—L. C. BUSHBY ; Miss A. WYNDHAM LEWIS ; Mrs. H. F. WITHERBY.

Members, 16 ; Guests, 3. Total, 19.

Owing to Government restrictions being relaxed, it was possible to hold the usual luncheon before the Meeting.

Some Ornithological Trips on the Continent.

Mr. B. W. TUCKER gave a talk, illustrated by lantern slides, on various ornithological trips on the Continent. He said that he had no new or remarkable results to present, but proposed to talk in a more or less random fashion about visits to several countries or places which were no longer accessible under war conditions. These were as follows :—

Corsica.—One of the attractive features of this very pleasant island is the wide variety of country and climatic conditions to be found in a comparatively small compass. The visitor can ascend in a quite short space of time from the hot Mediterranean littoral into scrub-covered hills and fine beech forests, thence into the cool pine forest of the higher mountains and, finally, on the highest summits to the zone of Alpine Pipits (*Anthus spinoletta littoralis*), Alpine Accentors (*Prunella collaris*) and Eagles. Slides were shown of some of the main types of country and scenery, including typical haunts of such characteristic Corsican species as La Marmora's Warbler (*Sylvia sarda*) and Whitehead's Nuthatch (*Sitta canadensis whiteheadi*). The latter, as is well known, affords a most

remarkable example of discontinuous distribution, the only other representatives of the species being found in North America and North China.

The French Pyrenees.—Slides were shown of the Cirque de Gavarnie and some of the neighbouring country. Reference was made to Wall-Creepers (*Tichodroma muraria*) on the cliffs behind the Cirque and to the numbers of large birds-of-prey to be seen in the late summer. Griffon Vultures (*Gyps fulvus*) are then frequent, apparently ranging from breeding-places in the more southern sierras; the Golden Eagle (*Aquila chrysaëtos*) is not uncommon, and on one occasion the speaker had an excellent view of a Lammergeier (*Gypaëtus barbatus*), which had been feeding on the carcase of a sheep.

The Camargue.—Slides were shown of various bird-haunts in the Camargue proper (Rhône delta), of a breeding-place of Savi's and Moustached Warblers (*Locustella luscinioides* and *Lusciniola melanopogon*) near Arles, of the neighbouring limestone hill country round Les Beaux, and of the Pont du Gard, the famous Roman aqueduct near Nîmes, which is a breeding place of Alpine Swifts (*Apus melba*). The extraordinary tract of stony desert-like country known as the Crau, between the Camargue and Marseilles, was also described and illustrated. This is the only European haunt outside the Iberian peninsula of the Pin-tailed Sand-Grouse (*Pterocles alchata*), which is still not uncommon.

Holland.—Slides were shown of the well-known bird resorts of Texel and the Naardermeer, but the speaker stressed that there were many other quite different types of bird-haunts in Holland, which were of much interest and little known to British ornithological visitors. Some examples described and illustrated were the closely protected colony of Spoonbills (*Platalea leucorodia*) in the dunes of North Holland—much larger than that at the Naardermeer, the vast Sandwich Tern (*Sterna sandvicensis*) colony on the sandbank of Griend, breeding-ground of White-spotted Bluethroat (*Luscinia svecica cyanecula*) in Friesland and of Little Bittern (*Ixobrychus minutus*) near Gouda, a sewage-farm at Waschmeer on the outskirts of Hilversum, and the Cormorant colonies at Wanneperveen and Lekkerkerk. The Waschmeer sewage-farm is a regular haunt of Black-necked Grebe (*Podiceps nigricollis*), Garganey (*Anas querquedula*), Little Ringed Plover (*Charadrius dubius curonicus*), etc., and is much visited by migratory waders in the late summer, especially Wood-Sandpipers (*Tringa glareola*). The Southern Cormorant (*Phalacrocorax carbo sinensis*) in Holland breeds in large colonies in trees. The Wanneperveen, colony is in a wood of alders round a duck decoy and had about 1000 nests in 1936. The occupied trees, long since dead from the intense manuring, and fairly loaded with nests, present a remarkable spectacle. The Lekkerkerk colony, though exceeded in size by Wanneperveen, is scenically the best worth seeing of the Dutch Cormorant colonies. It is

situated on the banks of a large pond at the foot of a dike along which the road runs. The trees are much larger than at Wanneperveen and, having their branches also absolutely loaded with nests, are perhaps even more impressive.

Observations on the Avifauna and Ornithological Work in New Zealand.

The following paper by Count K. A. Wodzicki, Consul-General for Poland in New Zealand, was read :—

The Ornitho-fauna of New Zealand, consisting of 230 species, is rather peculiar owing to several zoo-geographical and ecological factors, both in the past and at present. According to ecology, the birds in this country belong to the following four main groups : migrants, sea and water birds, endemic New Zealand birds and introduced birds.

The Godwits (*Limosa lapponica baueri* and *L. hæmastica*) and the Shining and Long-tailed Cuckoos (*Lamprococcyx lucidus* and *Urodynamis taitensis*) may be quoted as representatives of migratory birds of New Zealand. But as no banding records are as yet available in this Dominion, very little is known of their respective migrations and biology, and a full list of migratory birds is not yet completed. It must be pointed out that of the species above mentioned, the two former breed in the Northern Hemisphere, spending one or two winters here, while the two latter migrate up to the North for the duration of the New Zealand winter.

The sea and shore birds are numerous both in species and numbers, especially in some of the species. Edgar Stead, in his notes made during visits to some islands around Steward Island in November 1941, reports that an area of two hundred acres of Green Island was populated by about a million nests of Prions (*Pachyptila vittata* and *turtur*). This group includes in New Zealand waters seven species of Penguins (*Megadyptes antipodes*, *Eudyptes chrysocome*, *schlegeli*, *pachyrhynchus* and *sclateri*, *Eudyptula minor* and *albosignata*), common off both islands of New Zealand, while the Little Blue Penguin (*E. minor*) is found nesting as far as the southern part of the North Island. Three Storm Petrels, the Cape Pigeon and three Prions are common off-shore on both islands. The latter were recently the subject of an interesting paper by C. A. Fleming (5). The Shearwaters (*Puffinus carneipes*, *griseus*, *gavia* and *tenuirostris*) are frequently washed ashore after heavy gales. In February last I was fortunate in having the opportunity of visiting the nesting grounds of the Sooty Shearwater (New Zealand Mutton Bird), with their long runways, on the tree-clad steep slopes of Kapiti Island sanctuary.

The Petrels are represented by six species, and two Albatrosses and three species of Mollymawks haunt the waters between and around the

two islands. At the Dunedin Heads, South Island, five pairs of the Royal Albatross (*Diomedea epomophora sanfordi*) have been nesting regularly since 1919.

Apart from the rather ubiquitous Black Shag, representatives of six other species (*Phalacrocorax varius*, *sulcirostris*, *melanoleucus* and *chalconotus*, and *Stictocarbo punctatus* and *steadi* of Steward Island) were reported in the records of the Ornithological Society of New Zealand in 1940 and 1941.

The Australian Gannet (*Morus serrator*), common off-shore, is protected in its nesting colony at the Cape Kidnappers, North Island, which is claimed to be the only one on the mainland.

The Ducks are represented by six native and the introduced Mallard. Unfortunately, owing to inadequate protection, without a proper biological supervision some of them (*e. g.*, the Paradise Duck, *Casarca variegata*, the Grey Teal, *Anas gibberifrons*, and the Blue Duck, *Hymenolaimus malacorhynchus*) are in some parts of New Zealand well on the way to disappear within the next ten years or so.

Of the four Terns (*Chlidonias albistriata*, *Hydroprogne caspia*, *Sterna striata* and *nereis*), the Fairy Tern only is a rare bird.

The Black-backed Gull (*Larus dominicanus*), adapting itself to the present ecological conditions of this country, represents one of the most numerous species on the shores, and also to some extent inland, while the two other species, the Red-billed Gull (*L. scopulinus*) and Black-billed Gull (*L. bulleri*), are confined mostly to North and South Island respectively.

The North Island and South Island Pied Oyster-catchers (*Hæmatopus reischeki* and *finschi*) are a not uncommon feature of both islands' estuaries and also an unsettled systematical problem, as some people distinguish *H. unicolor*, a black Oyster-catcher, as a third distinct species.

Among other waders a few have to be mentioned especially : the New Zealand Dotterel (*Pluviorhynchus obscurus*) is very rare, while the Banded Dotterel (*Charadrius bicinctus*), present on many estuaries and shingle river beds, is the subject of an extensive study by some ornithologists, both in breeding and its rather obscure movements after the breeding season. Another common feature on the estuaries, swamps or rivers is the Stilt (*Himantopus leucocephalus*), while the Wrybill (*Anarhynchus frontalis*), with its reversed beak, is in summer confined to some parts of the South Island and moves in winter to North Island. The Pukeko (*Porphyrio melanotus*) and the Reef-Heron (*Demigretta sacra*), the latter a bird of a large geographical range, are rather common, while both the Bittern (*Botaurus poiciloptilus*) and the beautiful White Heron (*Egretta alba*) are confined to few scattered places only.

The Kiwi is still represented in small numbers by the three mainland

species (*Apteryx mantelli, A. oweni and A. haasti*) and the Steward Island Kiwi (*Apteryx lawryi*) in remote parts of the bush in these three islands.

Through the South Island Weka (*Gallirallus australis*), a flightless bird, and the Spotless Crake (*Porzana plumbea*) of an isolated small island off the North Island, we pass to native land birds of New Zealand. They are decreasing in numbers year after year, not perhaps so much owing to extermination by man, but more probably owing to the tremendous general ecological changes and to the introduction of several overseas mammals, also to a lack of proper biological control.

The problem of all these native land birds of New Zealand deserves a paper to itself. I would for the time being stress two points only: to give a few instances of birds which, like the Black-backed Gull, have adapted themselves to the new conditions, and afterwards, those who, owing to their particular insular biological habits, are at present retreating to their last haunts in the few not yet settled parts of both islands.

The Harrier (*Circus gouldi*), the Grey Warbler (*Pseudogerygone igata*), the Pipit (*Anthus novæzeelandiæ*), and perhaps the Fantail (*Rhipidura flabellifera*), belong to the few species which, sometimes adapting themselves to the pastoral conditions of the country, still find some possibility, if not to increase in numbers, at least not to decrease in the last few years.

Unfortunately, some of the unique characteristic birds of New Zealand, *e. g.*, the North Island Kiwi (*Apteryx mantelli*), the Kea (*Nestor notabilis*), the Brown Kaka (*Nestor occidentalis*), two species of the New Zealand Parrakeet (*Cyanorhamphus auriceps* and *novæzelandiæ*), the two Robins (*Miro longipes* and *australis*), the Whitehead (*Mohoua albicilla*), the Saddleback (*Creadion carunculatus*), and even the Tui (*Prosthemadera novæ seelandiæ*) and the Bell-bird (*Anthornis melanura*), are likely to be under death sentence, except, perhaps, on the two bird sanctuaries at Kapiti and Little Barrier Islands, where some of them may be preserved for posterity.

The problem of the introduced birds is similar to that in very many colonized countries, though through the progressing reduction in numbers of native birds and the lack of biological survey of the problem as a whole, it is even more important in New Zealand than anywhere else. The number and range of the introduced species is large, ranging from waterfowl (Mallard and the Australian Black Swan) through the game-birds (Pheasant and Californian Quail) to many Passeriformes. There are also self-introduced birds, *e. g.*, the White-eye, which came from Australia some 80 to 90 years ago, and which presents a problem of its own.

Several species, fortunately, did not survive, but many others spread up throughout the whole country and present an important problem, not only in respect to native birds, but to agriculture. One of the problems awaiting attention is an extensive study of their stomach contents: the

number of species and the conditions of life of the insects in New Zealand, for instance, seem to be smaller and different than in most European countries. It seems likely that many of these birds, at present in large numbers all over the country, have adapted themselves to a rather different staple food which is not very well known at present. Such studies would not only give an indication of their biological and economical position, but would also give an indication in respect to placing or removing them from the list of protected birds.

Here is an incomplete list of different introduced birds more or less common at present in New Zealand :—

Species.	Remarks.
1. Mallard (*Anas platyrhynchos*).	Constantly liberated, in some places equally common with the native *A. superciliosa*.
2. Canada Goose (*Branta canadensis*).	Confined to the South Island.
3. Black Swan (*Chenopis atrata*).	Australian species, spread all over the country ; protected. Presents a serious competition to native Ducks.
4. Pheasant (*Phasianus colchicus*).	Although constantly liberated, does not increase in numbers.
5. Brown-Quail (*Synoicus australis*).	North of Auckland only ; not common.
6. Californian Quail (*Lophortyx californica*).	Fairly common wherever suitable cover in North Island and in the warm district of Nelson, South Island.
7. Swamp-Quail (*Synoicus ypsilophorus*).	Scarce in some localities, North Island.
8. Rock-Pigeon (*Columba livia*).	On suitable cliffs and buildings in both Islands.
9. White-eye (*Zosterops lateralis*).	Self-introduced from Australia ; plentiful all over the country.
10. Greenfinch (*Chloris chloris*).	Common in many districts.
11. Chaffinch (*Fringilla cœlebs*).	Common and breeding all over the country, but does not go more than 100 yards into the bush.
12. Redpoll (*Acanthis cabaret*).	Well distributed in some districts from the extreme north to the south.
13. Goldfinch (*Carduelis carduelis*).	As above species, and even more plentiful.

14. House-Sparrow (*Passer domesticus*).	Well spread all over the country.
15. Yellow Hammer (*Emberiza citrinella*).	Well spread in the open country.
16. Cirl-Bunting (*Emberiza cirlus*).	Mostly in the South Island.
17. Song-Thrush (*Turdus ericetorum*).	One of the most plentiful birds all over the country, both in towns and plantations and farms.
18. Blackbird (*Turdus merula*).	Very plentiful all over the country, even more numerous than the Thrush, both in townships and in the country. Also present in isolated and uninhabited bird islands.
19. Hedge-Sparrow (*Prunella modularis*).	Common, but not north of Auckland.
20. Sky-Lark (*Alauda arvensis*).	Spread all over the country and common in all open places, especially in tussock country.
21. Starling (*Sturnus vulgaris*).	Very plentiful all over the country, nesting in holes of trees, banks and cliffs and in houses, but seems to be less numerous in the extreme south. Belongs probably to a non-migrating variety.
22. Mynah (*Acridotheres tristis*).	Fortunately restricted to the middle of the North Island and also to townships.
23. White-backed Magpie (*Gymnorhina hypoleuca*).	One of the most conspicuous and abundant birds, dominating the Harrier but dominated by the Rook. Increasing lately in numbers.
24. Rook (*Corvus frugilegus*).	Confined to arable, cultivated areas of both islands (Canterbury and South Hawkes Bay), where numerous.

The modern ornithological research work in New Zealand, initiated in the last century by Buller and Guthrie-Smith, and sporadically continued by different ornithologists, Dr. R. A. Falla, Edgar Stead, Dr. W. R. B. Oliver and others, in recent times, started really in 1939 with the establishment of the Ornithological Society of New Zealand, with Dr. R. A. Falla as President, Dr. W. R. B. Oliver and Edgar E. Stead as Vice-Presidents, Professor B. J. Marples as Secretary-Editor and C. A. Fleming

as Recorder. In spite of the war, which at once took some of its active supporters, ranging from people engaged in research work to field ornithologists and school-groups, a large part of them play an active part in exploring the neglected and interesting ornithological problems of New Zealand. The Society, owing to scarcity of funds, does not at present have its own journal, the two publications, *i. e.*, Annual Reports and Quarterly Bulletin, being duplicated and circulated to the members. The Society is also a member of the Royal Australasian Ornithological Union of Melbourne, Australia, and larger scientific papers are published in its journal.

Here are some of the most important items of research carried out by the O.S.N.Z., or by some of its members. As stated in the Constitution : "The object of the Society is to encourage, organize, and carry out field work on birds on a national scale. The collecting of specimens of birds or their eggs plays no part in the activities of the Society, which is concerned with the study of living birds in their natural state."

The three Annual Reports of the O.S.N.Z. which have been published brought forward a very large amount of material. Through short notes and lists of species a large amount of information has been collected, especially in the distribution of many birds, giving thus in many cases evidence as to the steps taken to preserve some species or to introduce a biological control in others. We will deal more extensively with some in the conclusion in the final paragraph on Bird Preservation in this country.

The O.S.N.Z. also encouraged its members to collect information in ocal investigations undertaken by some of its members. R. H. D. Stidolph, Masterton and C. A. Fleming, Wellington, are now engaged on an investigation of the biology and movements of the Banded Dotterel (*Charadrius bicinctus*), which is supposed to be a migrant, sometimes crossing the Tasman Sea to Australia. Another survey by R. B. Sibson, Auckland, included the status and distribution of the Dabchick (*Podiceps ruficollis*). Enquiries on behalf of the O.S.N.Z. are also being made on the nesting and biology of the Reef-Heron (*Demigretta sacra*), which is widespread in the tropical Pacific, Northern Australia and also in New Zealand, and on the White-throated Shag (*Phalacrocorax melanoleucus brevirostris*).

Considerable attention has been paid in the last few years by individual members of the Ornithological Society of New Zealand to several other more general problems of biology, ecology or ornithological monographs of certain species or territoriies.

L. E. Richdale, Dunedin (8), (9), (10), during the last years has been devoting his untiring energy to the breeding habits of the Erect-crested Penguin (*Eudyptes sclateri*) and the Royal Albatross (*Diomedea epomophora sanfordi*), both nesting at the Taiaroa Heads, Dunedin.

A. A. Kirk and Count K. A. Wodzicki will shortly publish a survey of bird life during one year's observation at the Waikanae River estuary, North Island; this will be the first study of this kind, including more than a year of systematic observations.

E. G. Turbott, Auckland, is progressing in his studies on the food and ecological conditions of the Grey Duck (*Anas superciliosa*). This is, I think, the first study on biology of waterfowl in this hemisphere on the lines of the latest publications of the International Committee for Bird Preservation.

Professor B. J. Marples, Dunedin, is making an extensive study of the White-eye (*Zosterops lateralis*), the self-introduced Australian bird, and now very well distributed throughout New Zealand. A paper including a large volume of field observation, also some data on banding, and with a large amount of laboratory work, is to be published shortly.

Count K. A. Wodzicki, Wellington, is collecting information about the breeding habits of the Blackbird and the White-eye, and especially to determine the effect of geographical position, that is to say, of different lengths of day, upon the dates of breeding. This study is, generally speaking, on the lines of the work done by Rowan in Canada and Bissonnette in the United States of America.

C. A. Fleming, Wellington, Recorder of the O.S.N.Z., besides his many and very valuable contributions in field ornithology, contributes new points on the ornithology of the Chatham Islands (5). In a recent paper he deals with the Neozelanic forms of the subgenus *Cookilaria* (6), and his latest paper on the phylogeny of Prions (7) gives an entirely new point of view of the Genus *Pachyptila*; it is a genuine attempt based on ontogeny of the bill, geographical distribution and its possible relation between environment and morphology.

Major G. A. Buddle (4), the well-known bird photographer, has described recently new features of the bird life on some isolated islands north of Auckland.

Finally, Dr. R. A. Falla, widely known through his many contributions to New Zealand and Antarctic ornithology, is at present engaged in an extensive study of the extinct Moas of New Zealand. During recent years much research has been done, particularly in the Pyramid Valley Swamp, South Island, where bones and other parts have been found in a splendid state of preservation in the peat. This work, done in collaboration with R. S. Allan, Professor E. Parcival and R. S. Duff (1), produced fresh prehistoric evidence, and, incidentally, a specimen of an egg was recorded. It seems likely that the Moa was still present during the time the Maoris were living in the South Island. No doubt this study will contribute largely to our knowledge of the systematic and prehistoric conditions of these birds, and also elucidate some of the controversies

which have arisen with the publication of the extensive monograph of Dr. Gilbert Archey, Auckland (2).

The problem of bird preservation in New Zealand was depicted in a gloomy, though, fortunately, not entirely correct, way in a recent article by H. Barraclough Fell (3) in ' Nature '. It has to be emphasized that very many factors were, and are, responsible for the present conditions of the New Zealand fauna, and the blame does not rest entirely with the natural history collectors of specimens. Some of these factors are beyond any control at present, and New Zealanders of to-day cannot be blamed for everything, though no doubt there was, and still is, not enough done, and there exists some local apathy.

The problem of preserving New Zealand's fauna deserves a special paper which should be written on the basis of an extensive biological study of the present biological conditions of New Zealand. Such a study should be made by trained biologists, who should also have an adequate understanding of the economic and social problems involved. Many changes have occurred, and are still occurring, since the dawn of that day when Captain Cook landed here and was awakened by a bird chorus. Besides the shooting and collecting by some exotic collectors, both of which fortunately are now completely supervised by the present Government, we have, for instance, a tremendous change in the environment of the landscape all over the country. Furthermore, the unfortunate, indiscriminate introduction of many species of overseas birds and mammals, the changed ratio of numbers of different birds, the problem of erosion seriously affecting this country at present, and other reasons, are undoubtedly much more important than the alleged extermination through shooting. The example of the Pukeko (*Porphyrio melanotus*), which is increasing in some districts in spite of shooting, may be an instance of some larger, primary causes of decline existing and remaining unremedied. The present Government of this Dominion, keenly interested in preserving this part of New Zealand's patrimony, has enforced the protection of previously-established bird sanctuaries, and has also established very restrictive laws on collecting and shooting. But as with human beings, a protective legislation is of little use so far as wild life is concerned unless at the same time social welfare is introduced and the general standard of life raised. The example of the achievements of Canada and the United States of America, based on a substantial collaboration of the biologists of those two nations, should be an encouragement for the future policy of New Zealand in this respect, and though some unique species are already completely destroyed, there is still plenty of scope for future work, provided these matters are taken on a very broad basis and with a perspective of many years ahead.

Regretably the New Zealand Forest and Bird Protection Society, though belonging in principle to the International Committee for Bird Preservation, is, I believe, the only one within the British Empire working without the slightest collaboration of biologists. As seen from the above paragraphs, some of these biologists have already done splendid work for New Zealand birds, bringing up-to-date evidence of what has to be done, in this country; but despite this attempts were made in some of the publications of the Society to describe scientists as being exclusively interested in collecting specimens for museums or aviaries.

I sincerely hope that the day will come when this outlook will change and serious new attempts be made to solve in a more adequate way the New Zealand bird problem and preserve in a more effective way some of these unique jewels of nature, both for New Zealand posterity and for other people.

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Mr. P. A. Clancey sent the following four communications :—

(1) On the Validity of Alauda arvensis scotica Tschusi, 1903.

In 'The Ibis', 1938, p. 748, I pointed out that Scottish examples of *Alauda arvensis* were separable from Continental specimens on account of their richer and more heavily marked plumage.

Tschusi, 'Ornithologisches Jahrbuch', xiv. 1903, p. 162, described the Scottish bird as distinct under the name *Alauda arvensis scotica*, and designated birds collected in Kirkcudbrightshire in 1883 as types. His description is thorough, and should be consulted by all those interested in this question.

Since the publication of my note (*loc. cit.*) on the question of the distinctness of the Scottish form I have been assiduously collecting and comparing material from all parts of the British Isles. I will admit that the breeding plumage of *Alauda arvensis* is well represented in most private and public collections, but the inadequacy of fresh autumn skins has for long been a source of worry. Indeed, shortly before his death, Dr. C. B. Ticehurst asked me to pay particular attention to the collecting of fresh autumn specimens on the breeding grounds, but it was not until the autumn of 1942 that I was able to find the necessary otiose moments. This free time resulted in the collection in south-western England (Wiltshire) of a large series in fresh dress, and this material has been largely instrumental in proving incontestably and irrevocably the distinctness of *Alauda arvensis scotica* Tschusi. Autumn skins of the typical race *Alauda arvensis arvensis* Linnæus, from Sweden, were not procurable, but through the kindness of a few friends I have been able to examine comparable series of skins from most European countries. All this material has led me to support, without further question, the validity of Tschusi's *Alauda arvensis scotica*. I note with considerable interest that H. F. Witherby, 'Handbook of British Birds', 1938, dismisses the race as an absolute synonym of *Alauda arvensis arvensis* Linnæus, and without comment. It is a great pity that Mr. Witherby did not deem it advisable to consult the rich collections available from Scotland, and I am afraid that he will be forced to reconsider many of his findings on Scottish races—findings invariably based on inadequate and badly collected material.

To conclude my prolegomenary remarks I should like to offer my thanks to my many collaborators, and particularly to Col. R. Meinertzhagen, Mr. Hugh Whistler, and Dr. J. M. Harrison, for allowing me to examine material in their collections.

Scottish birds in my series are mostly from the south-west—the region from which Tschusi got his specimens—but I also possess a good representative collection in breeding dress from the extreme north of Scotland (Sutherlandshire : collected June 1942), and I now intend to discuss the whole series of just under eighty skins from Scotland.

Generally speaking, birds from the area south of the Grampian Mountains form a reasonably constant population, but it should be noted that examples from the western districts are usually more richly pigmented than those from the east, where the form appears to be less stable, and the criteria are scarcely so palpable. My northern Scottish birds from Sutherlandshire are in worn dress, but, nevertheless, extremely heavily marked and richly tinted on the upper surfaces. Abrasion has rendered the underparts practically useless for comparative purposes, but I can still detect traces of deep colouring on the breasts and flanks of several specimens in the series. Breast-spots tend to be large and of an intense black colour.

They probably represent a new subspecies, but until I see birds in fresh plumage from northern Scotland, I hesitate to describe them as new to science. The same may be said of Irish birds, which strike me as being distinct from any described race of *Alauda arvensis*.

Carefully formed collections of unworn birds from northern Scotland and Ireland are needed before further races are separated in the British Isles. English examples are difficult to place with certainty, but are nearest *Alauda arvensis arvensis* Linnæus.

It is now my intention to deal with topotypical *Alauda arvensis scotica* Tschusi from south-west Scotland. The late Dr. C. B. Ticehurst (*in litt.*, 1940) was very dubious about the validity of the Scottish race, and informed me that some of my abraded examples of *A. a. scotica* were very close to *Alauda arvensis cantarella* Bonaparte, described from Italy. I agree that the skins examined by Dr. Ticehurst (all in my collection) are rather worn, but they are still noticeably richly tinted and heavily marked, and I am quite unable to match them with any of the many examples of *Alauda arvensis cantarella* Bonaparte examined. I am inclined to disregard Dr. Ticehurst's findings. *A. a. cantarella* is a very grey bird, and lacks the warm brown tones of Larks from western, central and northern Europe.

From the typical race *Alauda arvensis scotica* is separable in fresh autumn plumage on account of the more richly coloured upper surface and deeper tone of the wings, tail, breast and flanks. In this plumage the race is not obviously more heavily marked than the nominate form, but as the plumage wears the darker and more pronounced striæ become at once apparent. In breeding dress *A. a. scotica* stands well apart from the typical race on account of the more powerfully accentuated markings, especially on the crown. This is particularly true of summer birds. I can detect no differences in measurements.

The distinctions listed above are, in my opinion, sufficient to warrant the immediate resuscitation of this form from the synonymy. It is indeed lamentable that a good race such as *Alauda arvensis scotica* Tschusi should have been allowed to vegetate in the synonymy for nearly 40 years.

(2) A new Race of Rock-Pipit.

Since I wrote on the races of the Rock-Pipit, Bull. B. O. C. lxii. 1942, p. 57, I have had the opportunity to examine further material, and now find myself able to separate another race, as follows :—

Anthus spinoletta ponens, subsp. nov.

Description.—Nearest to *Anthus spinoletta petrosus* (Montagu) : Wales—from which it differs by being paler and browner above, less olive. Under-surface very pale, and sulphur-yellow suffusion found in *A. s. petrosus*, and

other forms, usually entirely lacking. Striæ tend to be rather nebulous and not so distinct as in the case of *Anthus spinoletta petrosus* (Montagu). Small series examined.

Distribution.—Ushant, Finistère, France. None from the mainland of France available for comparison.

Type.—Male, first autumn, moulting. Obtained by Col. R. Meinertzhagen on Ushant, Finistère, France, September 20, 1933. In my collection.

Co-type.—Male ad. Ushant, Finistère, France. September 22, 1933. In the collection of Colonel Meinertzhagen.

(3) A new Race of Tree-creeper.

Certhia familiaris meinertzhageni, subsp. nov.

Description.—Separable from *Certhia familiaris brittanica* Ridgway: England, on account of its much richer rufous upper parts, darker ear-coverts, and by having the flanks and belly copiously washed with rufous. (Two specimens from the type-locality examined).

Distribution.—As known at present, south-western Ireland.

Type.—Male. Caragh Lake, Co. Kerry, south-west Ireland, January 6, 1935. In the collection of Colonel Meinertzhagen.

Remarks.—Witherby's 'Handbook of British Birds', vol. i. 1938, p. 236, states that the buff wash on the underparts is more often prominent in Irish birds. My observations confirm this. It may here be remarked that birds from the north of Scotland show a tendency towards the northern European race *Certhia familiaris familiaris* Linnæus, 'Systema Naturæ', ed. x, 1, 1758, p. 118, restricted type-locality: Sweden.

Named in honour of Colonel R. Meinertzhagen, whose ceaseless research has added much to our knowledge of Palæarctic birds.

(4) The Occurrence of Fringilla coelebs coelebs Linnaeus and Turdus ericetorum catherinae Clancey in Wiltshire.

An example of the Continental Chaffinch, *Fringilla cœlebs cœlebs* Linnæus, was shot from a flock of similar birds near Amesbury, Wiltshire, on October 29, 1942. The bird, an adult male, was very fat and in good condition.

A male (first autumn) specimen of *Turdus ericetorum catherinæ* Clancey was obtained on Salisbury Plain near Amesbury, Wiltshire, on October 31, 1942. I have no other records of this dark Song-Thrush from Wiltshire.

Dr. Carmichael Low exhibited these specimens for Mr. Clancey.

Notes on Eastern African Birds.

Captain C. H. B. Grant and Lieut.-Colonel C. W. Mackworth-Praed sent the following seven notes :—

(1) On the Status of *Merops persicus erythræus* Moltoni, Atti Soc. Ital. Sci. Nat. lxvii. 1928, p. 179 : Cunama, Eritrea.

Moltoni had two specimens, apparently both being unsexed and undated. We have studied the description and plate iv., together with a large number of *Merops superciliosus persica* Pallas. Many specimens of the typical race have blue feathers or blue edges to the feathers of both the upper and underparts, blue edges to the flight-feathers and blue central tail-feathers. This may be partly due to fading. This blue coloration is well shown in three adult birds collected by Boyd Alexander on the Zambezi River on November 21 and 24, 1928. The female collected on November 21 is more pale blue-green below than green, and is in moult, the old flight-feathers being blue-edged, but the new primaries are green-edged. An adult taken at Khartoum, Sudan, on May 12, 1900, Brit. Mus. Reg. no. 1934.1.1.3479 (Witherby Coll.), has one central tail-feather green and the other blue. Moltoni's main characters are blue below, tending towards verdigris, and white throat. There seems little doubt that in Moltoni's two specimens the yellow pigment in the normal green is deficient, and thus causing the blue to become dominant and the throat to become white. Judging by the description, the plate is much too highly coloured, especially the underparts.

We are therefore of the opinion that *Merops persicus erythræus* Moltoni is a colour phase of *Merops superciliosus persica* Pallas, and must be placed as a synonym of it.

(2) On the Status of *Parus afer parvirostris* Shelley, Bds. Afr. ii. 1900, p. 241 : Salisbury, Southern Rhodesia.

Shelley compared this race to *Parus afer* Gmelin, and Reichenow compared his *Parus griseiventris* (J. f. O. 1882, p. 210 : Kakoma, Tabora district, Tanganyika Territory) to *Parus rufiventris* Bocage. Shelley's type is a male, wing 78 mm. and bill from gape 12 mm. Reichenow's type is a male, wing 80 mm. and bill from gape 12 mm.

Parus afer parvirostris has a small bill as against *Parus afer afer* when sexes are compared, and so has *Parus griseiventris* when compared with *Parus afer afer*, but when compared with *Parus afer parvirostris* the bills are found to be the same, as are the wing-measurements and colour. We can see no characters by which they can be separated, and are of opinion that *Parus afer parvirostris* Shelley must become a synonym of *Parus afer griseiventris* Reichenow.

(3) On the Relationship of *Parus niger* Vieillot and *Parus insignis* Cabanis.

All authors have placed *Parus insignis* as a race of *Parus niger*, and Austin Roberts, Bds. S. Africa, 1940, p. 219, appears to be the only author to cast doubt on this, correctly pointing out that *Parus niger* has white on the lower abdomen and in the under tail-coverts which *Parus insignis* lacks, and has kept *Parus niger* as a separate species from *Parus insignis*, placing this latter as a race of *Parus leucomelas* Rüppell.

There is no doubt that Austin Roberts is correct, and we have found support for this decision in the distribution of these two birds. In addition, we find that *Parus niger* has broad white edges to the outer tail-feathers and broad white tips to all tail-feathers, whereas *Parus leucomelas insignis* has very narrow white edges and tips or no white at all ; and whereas in *Parus niger* the sexes differ appreciably in colour, in *Parus leucomelas insignis* there is practically no sexual difference.

The characters and distribution are as follows :—

Parus niger Vieill.

Parus niger Vieillot, N. Dict. d'Hist. Nat. xx. 1818, p. 325 : Sondag River, eastern Cape Province, South Africa.

Male above glossy blue-black ; below chin to chest duller blue-black ; breast to belly dull blackish-grey ; lower belly and under tail-coverts mixed black and white ; broad white edges to outer tail-feathers and broad white tips to all tail-feathers.

The female is duller above than the male ; below dull slatey grey ; under tail-coverts and tail as in male. Wing, male 81–87 mm., eight specimens measured ; female 76–84 mm., seven specimens measured.

Distribution.—Northern Nyasaland at Lake Kasuni to southern Nyasaland, Northern Rhodesia as far west as Lusaka, Portuguese East Africa as far north as Mirrote on the Lurio River, and south to Bechuanaland, Transvaal, eastern Cape Province and Natal.

Parus leucomelas insignis Cab.

Parus (*Pentheres*) *insignis* Cabanis, J. f. O. 1880, p. 419 : Malandje, northern Angola.

Male : above and below glossy blue-black, glossier than *P. niger* ; lower belly and under tail-coverts black ; very narrow white edges to outer tail-feathers and very narrow white tips to all tail-feathers and often tail-feathers wholly black. The female is slightly less bright than the male, but not constantly so. Wing, male 86–96 mm., eleven specimens measured ; female 84–87 mm., five specimens measured.

Distribution.—Angola to southern Belgian Congo, Northern Rhodesia at Mankoya and Sesheke, Nyasaland at Vipya, Mzimba, Mkocha, Mphunzi,

and Dedza, eastern and southern Tanganyika Territory from Bagamoyo to the Njombe area, the Tete district, northern Portuguese East Africa at Villa Coutinho and 30 miles north of Tete.

This shows that there is a considerable overlap in distribution in Northern Rhodesia and northern Nyasaland, and precludes *Parus niger* and *Parus insignis* being treated as races of each other.

(4) On the Status of *Parus niger purpurascens* van Someren, Bull. B. O. C. xli. 1921, p. 112 : Entebbe, southern Uganda.

Van Someren compared this race with *Parus leucomelas* Rüppell, *Parus niger lacuum* Neumann, and *Parus insignis* Cabanis, and gives wings in males as 83–85 and in females as 78–82 mm.

A comparison of specimens of *Parus leucomelas guineensis* Shelley and *Parus niger purpurascens* shows that both have the purple wash, and that there is no difference in colour. Wing-measurements give north-western Uganda, male 78, female 75 mm. ; south-eastern Sudan, female 81 ; Uelle, male 82 ; Gold Coast, male 81 ; Nigeria, male 84, female 77 mm. Dr. Bannerman has kindly given us wing-measurements as follows :— Senegal to Nigeria, 70–81 ; Darfur and Bahr-el-Ghazal, 75–84 mm. ; Cameroon, males 80–86, females 78–80 mm., and for *P. purpurascens*, males 81–86, females 78–83 mm.

There is therefore no difference in size between West African and Uganda birds, and as there is no difference in colour, *Parus niger purpurascens* van Someren must become a synonym of *Parus leucomelas guineensis* Shelley.

(5) On the Races of *Anthoscopus caroli* Sharpe and *Anthoscopus roccatii* Salvadori occurring in Eastern Africa.

These two species are equal in size and general characters and differ only in colour, *A. caroli* having a grey upper side and *A. roccatii* a green upper side. Although below *A. caroli* is generally buffy or tawny and *A. roccatii* is generally not buffy or tawny, this colour is to be seen on the lower belly and under tail-coverts. The races that have been described must therefore be attached to these species mainly by the colour of the upper side.

Our examination of the series in the British Museum shows that *A. caroli* has three races and *A. roccatii* also three races in Eastern Africa. Outside Eastern Africa we find that *Anthoscopus ansorgei rhodesiæ* W. L. Sclater, Bull. B. O. C. lii. 1932, p. 143 : Mt. Sunzu, near Abercorn, north-eastern Northern Rhodesia, should also be treated as a race of *Anthoscopus roccatii*, as the upper parts are distinctly washed with green. The known distribution of this race is from Abercorn to Elizabethville and Ndola.

The races we are able to recognise in Eastern Africa are as follows :—

Anthoscopus caroli sylviella Reichw.

Anthoscopus sylviella Reichenow, O. M. 1904, p. 27 : Usafua, Rungwe district, south-western Tanganyika Territory.

Above grey, below wholly deep buff.

Distribution.—North-eastern (east of Lake Natron) to south-western Tanganyika Territory.

Anthoscopus caroli sharpei Hart.

Anthoscopus sharpei Hartert, Bull. B. O. C. xv. 1905, p. 75 : Usambiro, Tabora district, central Tanganyika Territory.

Above and below darker ; forehead tawny, not pale buffy.

Distribution.—Kenya Colony and Tanganyika Territory from the Kikuyu area to the Tabora district and west of Lake Natron.

Anthoscopus caroli rothschildi Neum.

Anthoscopus rothschildi Neumann, J. f. O. 1907, p. 597 : Simba, south-eastern Kenya Colony.

Above clearer ash-grey.

Distribution.—South-eastern Kenya Colony. (No specimens examined.)

Anthoscopus roccatii roccatii Salvad.

Anthoscopus roccatii Salvadori, Bull. Mus. Torino, xxi. no. 542, 1906, p. 2 : Entebbe, southern Uganda.

Above pale olive-green, forehead yellowish ; below dull yellowish ; lower belly and under tail-coverts slightly buffy.

Distribution.—Southern half of Uganda.

Anthoscopus roccatii robertsi Haagn.

Anthoscopus robertsi Haagner, Ann. Trans. Mus. i. 1909, p. 233 : Villa Pereira, Boror, Portuguese East Africa.

Below paler yellow ; belly and under tail-coverts more distinctly warm buff. Wing 51 to 58 mm.

Distribution.—Western Northern Rhodesia at Mongu and Mankoya to Nyasaland and the southern half of Portuguese East Africa, north of the Zambezi.

Anthoscopus roccatii taruensis van Som.

Anthoscopus roccatii taruensis van Someren, Bull. B. O. C. xli. 1921, p. 112 : Samburu, eastern Kenya Colony.

Similar to *A. r. robertsi* but smaller. Wing 50 mm. and under.

Distribution.—South-eastern Kenya Colony from the Tana River area to Taru, Samburu and Chamganwe.

(6) On the Type-locality of *Oriolus monacha* (Gmelin), Syst. Nat. i. pt. 2, 1799, p. 824.

Gmelin gives as locality "Abyssinian woods", and two references as follows:—Buffon, Hist. Nat. des Ois, 3, 1775, p. 405: no locality, and Latham, Syn. ii. 1, 1783, p. 77, no. 102: woods of Abyssinia. Latham gives a reference to Buffon, but Buffon gives no references. The Abyssinia of 1775–1799 was restricted to Eritrea and northern Abyssinia, and we can therefore fix the type-locality of *Oriolus monacha* (Gmelin) as Eritrea.

(7) On the Type-locality of *Corvultur albicollis* (Latham), Ind. Orn. i. 1790, p. 151.

Sclater, Syst. Av. Æthiop. ii. 1930, p. 651, gives Africa, as does Latham in his original description.

Latham gives a reference to Latham, Syn. Supp. 1787, p. 75, no. 2, where no locality is given. In this Latham gives a reference to Gen. Syn. i. 1781, p. 369, no. 2, where the erroneous locality of the Friendly Isles is given. In the Gen. Syn. Suppl. ii. 1802, Latham gives *Corvus albicollis* and *Corbeau vautourin* Levaill., Ois. d'Afrique, pl. 50, 1799, and states that Levaillant found this Crow "among the Great Namaquas . . .", and in Gen. Hist. Bds. iii. 1822, p. 8, gives references to his original description and Corbiveau, Levaillant, Ois. d'Afr. ii. pl. 50.

It is clear that the *Corvus albicollis* of Latham is the same as Levaillant's Le Corbivau, no. 50, Ois d'Afr. ii. 1799, who gives Grand Namaquois, Cape Town and Swarte-Land. We can therefore fix the type-locality of *Corvultur albicollis* (Latham) as Great Namaqualand, southern south-west Africa.

NOTICES.

Treasurer's Address.

Will Members kindly note that the address of the new Treasurer, Miss E. P. Leach, will be:—

c/o The British Museum (Natural History),
Cromwell Road, South Kensington,
London, S.W. 7.

Those who do not pay their annual subscription by Banker's Order should send this to that address as soon after the opening of the new Session as possible.

Date of next Meeting.

The date of the next Meeting of the Club has not yet been decided. Members will be notified in due course some time in the beginning of next year.

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

23 MAR 1943
PURCHASED

No. CCCCXLVI.

Owing to difficulties of accommodation and absence of Members, no Meeting of the Club was held in February.

Notes on Eastern African Birds.

Captain C. H. B. Grant and Lieut.-Colonel C. W. Mackworth-Praed sent the following six notes :—

(1) On the Races of *Tchagra senegalus* (Linnæus) occurring in Eastern Africa.

Sclater, Syst. Av. Æthiop. ii. 1930, p. 627, states, in footnote 2, that in his opinion only *Tchagra senegalus* should be recognized and perhaps *Tchagra senegalus camerunensis* (Neumann), and in Jackson's Bds. K. C. and Uganda, 1938, p. 1224, gives the distribution of *T. s. senegalus* as Senegal to Uganda, Kenya Colony and to eastern Cape Province. Van Someren, Nov. Zool. xxix. 1922, p. 111, recognizes four races, and in Nov. Zool. xxxvii. 1932, p. 304, recognizes a fifth race. Friedmann, Bull. 153, U.S. Nat. Mus. 1937, p. 292, gives a useful list of all the names which have been given to this bird, and recognizes seven races in Eastern Africa. Van Someren, J. E. A. & Uganda N. H. Soc. xiv. 1939, p. 104, discusses this question. Bannerman, Bds. Trop. W. Afr. v. 1939, p. 418, restricts the typical race to West Africa.

In view of this diversity of opinion, we have examined the good series in the British Museum collection and agree with Sclater that the typical race extends from Senegal to the Cape Province. There is considerable individual variation, and it is only on general characters that races can be recognized.

We can recognize six races throughout Africa, three of which occur in Eastern Africa, as follows :—

Tchagra senegalus senegalus (Linnæus).

Lanius senegalus Linnæus, Syst. Nat. 12th ed. i. 1766, p. 137 : Senegal ; of which *Pomatorhynchus orientalis* Cabanis, in V. d. Decken's Reise, iii. 1869, p. 27 : Mombasa, eastern Kenya Colony ; *Pomatorhynchus senegalus*

armenus Oberholser, Proc. U.S. Nat. Mus. xxx. 1906, p. 809 : Taveta, southern Kenya Colony ; *Telephonus senegalus pallidus* Neumann, J. f. O. 1907, p. 375 : Accra, Gold Coast Colony ; *Telephonus senegalus catholeucus* Neumann, J. f. O. 1907, p. 377 : Karo Lola, Italian Somaliland ; and *Harpolestes senegalus mozambicus* van Someren, Bull. B. O. C. xli. 1921, p. 103 : Lumbo, northern Portuguese East Africa, are synonyms.

Mantle brown. Wing 79–92 mm. One hundred and seventy-eight specimens examined.

Distribution.—Senegal, south-western Sudan, Uganda, Kenya Colony, and southern Italian Somaliland to Angola and Cape Province.

Tchagra senegalus habessinica (Hempr. & Ehr.).

Lanius senegalus var. *habessinica* Hemprich & Ehrenberg, Symb. Phys. i. 1823, fol. E : Eritrea ; of which *Telephonus senegalus erlangeri* Neumann, J. f. O. 1907, p. 373 : Lake Abaya, southern Abyssinia, and *Tchagra senegala warsangliensis* Clarke, Bull. B. O. C. xl. 1919, p. 50 : Mush Haled, eastern British Somaliland, are synonyms.

Mantle darker, more earth-brown. Wing 80–91 mm. Sixty-two specimens examined.

Distribution.—Eritrea and Abyssinia to British Somaliland and southern Sudan.

Tchagra senegalus remigialis (Hart. & Finsch).

Telephonus remigialis Hartlaub & Finsch, Vög. Ost. Afr. in Von der Decken's Reise, iv. 1870, p. 34 : Blue Nile, Eastern Sudan.

Mantle tawny brown, below whiter. Wing 83–92 mm. Thirty-three specimens examined.

Distribution.—The Sudan from Darfur to the Blue Nile and south to Lake No.

Note.—*Tchagra senegalus camerunensis* (Neumann) J. f. O. 1907, p. 375 : Jaunde, Cameroon (seven specimens examined), and *Tchagra senegalus nothus* (Reichenow), J. f. O. 1920, p. 399 : Lake Chad District (eight specimens examined), are good races and occur south and north respectively of *T. s. senegalus*, *T. s. camerunensis* occurring in southern Nigeria, southern half of Cameroon, and southern French Equatorial Africa as far east as the Ubangi River, and *T. s. nothus* occurring from the French Niger to Lake Chad area, including the northern areas of Nigeria. *Tchagra senegalus timbuktana* Bates, Bull. B. O. C. liii. 1932, p. 74 : Timbuktu (three specimens examined), is also a good race, confined to the Timbuktu area.

(2) On the Races of *Oriolus monacha* Gmelin occurring in Eastern Africa.

Sclater, Syst. Av. Æthiop. ii. 1930, p. 648, recognizes five races in Eastern Africa. Van Someren, Nov. Zool. xxix. 1922, p. 127, describes *Oriolus larvatus kikuyuensis* from the Kenya highlands as having a wing of 137–147 mm. As birds of Uganda and Tanganyika Territory have wings up to 145 mm., and from south-eastern Belgian Congo and Nyasaland up to 142 mm., the wing length is not a racial character. Meinertzhagen, Ibis, 1923, p. 76, places *O. m. kikuyuensis* as a race of *O. m. rolleti*, as does Granvik, Rev. Zool. Bot. Afr. xxv. 1934, p. 127. Friedmann, Bull. 153, U. S. Nat. Mus. 1937, p. 66, discusses the races, and on p. 70 gives a table of measurements, but appears to have overlooked the fact that *O. m. permistus* was described from Gofa between the Omo River Valley and Lake Abaya, and, therefore, his table of measurements under *O. m. rolleti* is surely applicable to *O. m. permistus*. Friedmann on p. 68 figures some tail feathers showing that *O. m. monacha* has the outer tail feathers wholly yellow. This is not the case, as in the most northern specimens from Eritrea and Shoa only a few specimens have wholly yellow outer tail feathers. This character of a wholly yellow outer tail feather is therefore not a racial one. In the area from Eritrea to Lake Zwai we find the pattern in the tail changes from green in the north, with little or no black, to a black pattern in the south, these characters overlapping in the Shoa area. We have examined ten specimens from Eritrea and northern Abyssinia and twenty-two from central and southern Abyssinia, and find the pattern in the tail varies considerably individually, as is shown by Friedmann in his figure 7. The mantle is also variable individually and is not a character for racial distinction.

Oriolus monachus larvatus Lichtenstein, Verz. Doubl. 1823, p. 20: Eastern Cape Province, shows only one character by which it can be distinguished, *i. e.*, the length of the bill (culmen from base), 27–31 mm., twelve specimens measured. General colour, amount of black in tail and other characters are not constant, and the young bird has the head and neck markings of *O. m. rolleti*, but is more variable, and some specimens approach *O. m. permistus*.

The distribution of *O. m. larvatus* is: Southern Rhodesia and southern Portuguese East Africa to the Cape Province and Natal.

The evidence before us shows that only three races can be recognized in Eastern Africa, as follows:—

ORIOLUS MONACHA MONACHA (Gmelin).

Turdus monacha Gmelin, Syst. Nat. i. pt. 2, 1799, p. 824: Eritrea. Tail yellow-green, with broad golden-yellow ends to all except central feathers, outermost tail feathers sometimes wholly golden yellow.

Wing 128–145; culmen from base 25–28 mm. Ten specimens measured.

Distribution.—Eritrea and northern Abyssinia, as far south as the Shoa area.

Oriolus monacha rolleti Salvad.

Oriolus rolleti Salvadori, Atti Acad. Torino, vii. 1864, p. 151 : Lat. 7° N. on White Nile, southern Sudan ; of which *Oriolus percivali* O.-Grant, Bull. B. O. C. xiv. 1903, p. 18 : Kikuyu, Kenya Colony, and *Oriolus larvatus kikuyuensis* van Someren, Nov. Zool. xxix. 1922, p. 127 : Nairobi, Kenya Colony, are synonyms.

Differs from *O. m. monacha* in having the green pattern in the tail replaced by black, central tail feathers varying from yellow-green with no black to some black or wholly black.

Wing 123–149 ; culmen from base 22–27 mm. Ninety-seven specimens measured.

Distribution.—Central Abyssinia from the Shoa area and west of the Omo River Valley to southern Sudan, Angola, Nyasaland, northern Portuguese East Africa and Bechuanaland.

Oriolus monacha permistus Neumann.

Oriolus monachus permistus Neumann, O. M. 1904, p. 145 : Gadat, Gofa, south-western Abyssinia ; of which *Oriolus larvatus reichenowi* Zedlitz, J. f. O. 1916, p. 1 : Afgoi, southern Italian Somaliland, is a synonym.

Smaller, but not constantly so, than *O. m. rolleti*. The young bird has the chin and throat yellow streaked with black, which extends in some on to the upper chest ; not black and yellow and more sharply defined from the chest as in the young of *O. m. rolleti*.

Wing 115–132 ; culmen from base 23–25 mm. Sixteen specimens measured.

Distribution.—Southern Abyssinia, east of the Omo River Valley to southern Italian Somaliland, and eastern Tanganyika Territory as far south as Dar-es-Salaam and west to Morogoro, where it intergrades with *O. m. rolleti*.

(3) On the Characters of *Corvus edithæ* Phillips, Bull. B. O. C. iv. 1895, p. 36 : Dejamio, Hainwana Plain, British Somaliland.

In the original description this bird was compared to *Corvus corone* Linnæus, and not to *Corvus ruficollis* Lesson, Traité d'Orn. 1831, p. 329 : Cape Verde Islands. The type is an unsexed adult and agrees perfectly in coloration with specimens of *C. ruficollis*, but has a culmen of 51 mm. and a wing of 325 mm. Meinertzhagen, Nov. Zool. 1926, p. 105, gives for *C. ruficollis*, wing 353–420 mm., culmen 57–75 mm., and for *C. edithæ*,

wing 321–356, culmen 50–52 mm. The character of the base of the breast feathers, being whiter in *C. edithæ* than in *C. ruficollis*, as given by Friedmann, Bull. 153, U.S. Nat. Mus. 1937, p. 76, does not hold good, and we cannot see any difference in this respect between Eastern African and Cape Verde Island specimens.

Our measurements give for Cape Verde Island specimens : males (eight), wing 361–385, culmen 63–72 ; females (nine), wing 373–392, culmen 61–67 mm. French Sudan : female (one), wing 393, culmen 67 mm. Lake Chad : male (one), wing 414, culmen 68 mm. ; female (one), wing 408, culmen 63 mm. Egypt : male (one), wing 420, culmen 70 mm. ; female (one), wing 395, culmen 66 mm. ; unsexed (three), wing 364–383, culmen 62–73 mm. Anglo-Egyptian Sudan : male (six), wing 385–409, culmen 64–71 mm. ; females (two), wing 369–377, culmen 65–66 mm. Abyssinia, the Somalilands and Kenya Colony : males (eight), wing 311–366, culmen 51–57 mm. ; females (four), wing 311–367, culmen 49–52 mm. ; unsexed (two), wing 323–354, culmen 50–55 mm. Socotra : males (two), wing 376–392, culmen 65–70 mm. ; females (two), wing 347–378, culmen 63–64 mm. ; Arabia : males (four), wing 376–406, culmen 67–71 mm. ; females (four), wing 365–388, culmen 62–70 mm. ; unsexed (two), wing 387–393, culmen 63–65 mm. Persian Gulf : female (one), wing 370, culmen 61 mm. India : males (three), wing 372–395, culmen 66–68 mm. ; females (three), wing 364–388, culmen 62–65 mm. ; unsexed (three), wing 383–408, culmen 62–70 mm.

Sclater, Syst. Av. Æthiop. ii. 1930, p. 650, casts doubt on a specimen in the British Museum from Brava, southern Italian Somaliland, and Meinertzhagen, Nov. Zool. 1926, p. 106, considers this specimen could be either *C. ruficollis* or *C. edithæ*.

The wing measurement of adults of *C. ruficollis* is 347–420 mm. and of *C. edithæ* 311–367 mm., showing an overlap of 20 mm.

The culmen measurement of adults of *C. ruficollis* is 61–73 mm. and of *C. edithæ* 49–57 mm. Meinertzhagen gives culmen of *C. ruficollis* down to 57 mm. for Southern Algeria, quoted from Geyr, for Muscat, Southern Arabia and the Sinai Peninsula. Even allowing for this, we find that there is no overlap in the culmen measurements between *C. ruficollis* and *C. edithæ*, and our measurements give a difference of 4 mm.

These figures show that although *C. edithæ* is smaller than *C. ruficollis*, the wing measurements are not a decisive character, but that the culmen is, and that therefore there can be no question that the specimen from Brava, wing 367, culmen 56 mm., is *C. edithæ*, and that it is correctly localized. Judging by the measurements it would appear that the type of *C. edithæ* is an adult female and the specimen from Brava an adult male. *Corvus corax edithæ* Phillips can therefore be recognized by having a smaller bill than *Corvus ruficollis ruficollis* Lesson, as is well shown on pls. x. and xi. in Nov. Zool. xxxiii. 1926.

(4) On the Status of *Pyrrhocorax pyrrhocorax docilis* (Gmelin), Reise Russland, iii. Theil, pl. 39, p. 365, 1774: Gilan, Iran.

Hartert in Vög. pal. Faun., Erganz. 1932, p. 27, states that this race has the upper wing-coverts more or less green, and gives the wing as 280–327 mm., as against 253–260 in the European race. An examination of the series in the British Museum collection shows that the character of the colour of the wing-coverts is not constant, but that the size of the males does support this race. Our wing measurements give: British Isles, males 255–275 mm. (seven); Iran, Syrian Desert and Persian Gulf, 287–320 mm. (six); Crete, 295–315 mm. (two); Marocco, 315 mm. (one); Abyssinia, 310–313 mm. (two). In the females there is a considerable overlap in measurement: British Isles, 253–292 mm. (six); Iran and Syrian Desert, 284–300 mm. (three); Crete, 288–290 mm. (two); Marocco, 265 mm. (one); Abyssinia, 305–322 mm. (two).

The distribution of *Pyrrhocorax pyrrhocorax docilis* is:—Marocco and Algeria to Crete, Syria, the Caucasus, Iran, Afghanistan, Baluchistan, Arabia and Abyssinia.

Wing in males, 287–320; females, 265–322 mm.

(5) On the Races of *Onychognathus morio* (Linn.).

Sclater, Syst. Av. Æthiop. ii. 1930, p. 665, recognizes five races, and in the Bull. B. O. C. xlv. 1924, p. 5, discusses the races and figures the bills. Our examination of the series in the British Museum shows that the size and shape of the bill in *O. m. shelleyi* (Hartert) are so close to that of *O. m. rüppellii* (Verreaux) that no real division is recognizable.

We therefore recognize four races, three of which occur in Eastern Africa:—

ONYCHOGNATHUS MORIO MORIO (Linn.).

Turdus morio Linnæus, Syst. Nat. 12th ed. i. 1766, p. 297: Cape of Good Hope.

Bill as shown in fig. *a*, Bull. B. O. C. xlv. 1914, p. 6. Twenty specimens examined.

Distribution.—Nyasaland and Portuguese East Africa to South Africa.

ONYCHOGNATHUS MORIO RÜPPELLII (Verr.).

Amydrus rüppellii Verreaux, in Chenu's Encycl. d'Hist. Nat., Ois. v. 1865, p. 166: Abyssinia; of which *Amydrus morio shelleyi* Hartert, Kat. Vög. Mus. Senck. 1891, p. 75, note: Ugogo, Dodoma District, Tanganyika Territory, is a synonym.

Bill longer and heavier, with a more curved culmen. Forty-five specimens examined.

Distribution.—Sudan and Abyssinia to Mt. Elgon (foothills), Kenya Colony and Tanganyika Territory.

Onychognathus morio neumanni (Alex.).

Amydrus neumanni Alexander, Bull. B. O. C. xxiii. 1908, p. 41 : Petti, Northern Nigeria.

Bill rather shorter, heavy and deep. Thirteen specimens examined.

Distribution.—Northern Nigeria and northern Cameroon to French Equatorial Africa.

Note.—Does not occur in southern Sudan ; the race in that area being *O. m. rüppellii.*

Onychognathus morio montanus (van Som.).

Amydrus montanus van Someren, Bull. B. O. C. xl. 1919, p. 52 : Mt. Elgon.

Bill more slender than *O. m. rüppellii.*

Distribution.—Mt. Elgon, above 9000 feet. No specimens seen.

(6) On the Status of *Spreo pulcher rufiventris* (Rüppell), N. Wirb. Vög. 1835, pp. 24 and 27, pl. ii. fig. i. : Northern Abyssinia.

Our examination of the small series in the British Museum collection shows that Eritrean and Northern Abyssinian birds are richer coloured than Senegal specimens, and that this race can be recognized, thus agreeing with Reichenow, O. M. 1910, p. 9 ; Zedlitz, J. f. O. 1911, p. 9, and Hartert, Nov. Zool. 1915, p. 261. Sclater and M.-Praed, Ibis, 1918, p. 429, do not recognize this race, and Sclater, Syst. Av. Æthiop. ii. 1930, p. 669, does not mention it. The distribution of the two recognizable races is as follows :—

Spreo pulcher pulcher (Müll.).

Turdus pulcher P. L. S. Müller, Syst. Nat., Suppl. 1776, p. 139 : Senegal ; of which *Spreo pulcher intermedius* Zedlitz, 1910, p. 9 ; Giddar, Adamaua, Cameroon, is a synonym.

Distribution.—Senegal to French Equatorial Africa. Eight specimens examined.

Spreo pulcher rufiventris (Rüpp.).

Lamprotornis rufiventris Rüppell, N. Wirb. Vög. 1835, pp. 24 and 27, pl. 11, fig. i. : Northern Abyssinia ; of which *Lamprotornis chrysogaster* var. *abyssinica* Rüppell, N. Wirb. Vög. pp. 24 and 27, pl. 11, fig. i. is a substitute name.

Generally richer coloured than *S. p. pulcher*.

Distribution.—Central and eastern Sudan to Eritrea and Northern Abyssinia. Three specimens examined.

The other specimens in the British Museum collection are not available.

On the exact Type-locality of Sitta europaea affinis Blyth, 1846.

Mr. P. A. Clancey sent the following note :—

Recent investigations into the subspecific status of *Sitta europæa affinis* Blyth have shown that the race is not constant throughout its entire range. Generally speaking, for the purpose of this short communication birds from the extreme east of England are richly pigmented on the underparts, pale above (East Suffolk, 1941), and are scarcely separable from examples of *Sitta europæa cæsia* from Holland and Germany. Specimens from Hertfordshire, Kent and western districts of Essex examined are paler below but darker above when compared with East Suffolk skins ; while birds collected in the valley of the River Avon, near Amesbury, Wiltshire, in the autumn of 1942, are extremely pale, both above and below, and are quite distinct from eastern English examples of *Sitta europæa* from all the above-mentioned localities.

This information points to the instability of the British race of Nuthatch, and to the advisability of restricting the type locality of *Sitta europæa affinis* Blyth, 1846.

Blyth's name *affinis* first appears in the Journal of the Asiatic Soc. Bengal, xv. p. 289, 1846, descriptive notes on p. 288. The type-locality is given as England. When Blyth described the new *Sitta* he said that he had just received collections of British birds from Mr. H. E. Strickland, Mr. Kirtland of the Ashmolean Museum, Oxford, Mr. Bartlett of London, and Mr. Davison of the Alnwick Museum. No information is supplied as to which collection contained Nuthatches, but in the ' Catalogue of Birds in the Collection of the Asiatic Society ' by Blyth, printed in 1849, but not published until 1852, under *Sitta cæsia*, syn. *Sitta affinis*, three specimens are listed. The first specimen was presented by Mr. H. E. Strickland, the second by Mr. Kirtland, and the third by the Cornish Institute (1847). As the third bird was received after 1845, we can ignore it, and we are now free to deal with the first two donors.

H. E. Strickland lived at Tewkesbury, Gloucestershire, and Evesham, Worcestershire, and Kirtland was in the Ashmolean Museum, Oxford ; therefore it is reasonable to assume that the birds sent by them to Blyth came from western England ; and as Blyth's first reference is to Strickland I propose to restrict the type-locality of *Sitta europæa affinis* Blyth, 1846, to Gloucestershire.

Hartert's *Sitta europæa britannica*, Nov. Zool. 1900, p. 526, was separated on Hertfordshire birds. Type: Tring Park, Hertfordshire, October 1898.

On the production of further material it may be found possible to recognize two or three distinct races of the Nuthatch in England and Wales.

I am deeply indebted to Mr. N. B. Kinnear for his help with the literature.

Mr. P. A. Clancey sent the following two notes :—

1. The Continental Chaffinch in Wiltshire.

Two adult male Continental Chaffinches, *Fringilla cœlebs cœlebs* Linnæus, were shot from a small flock on the Salisbury Plain near Amesbury, Wiltshire, on December 19, 1942. A further example has already been recorded (Bull. B. O. C. lxiii. 1942, p. 42), and this race of Chaffinch would appear to be of not infrequent occurrence in Wiltshire.

2. Some Supplementary Notes on Emberiza citrinella caliginosa Clancey, 1940.

In June 1942 a series of breeding specimens of *Emberiza citrinella caliginosa* Clancey, Ibis, 1940, p. 94, was collected in the type-locality: Dornoch, Sutherlandshire, northern Scotland. They were tolerably common in scattered pine growth on the hillsides, and by no means confined to cultivation.

The series has been compared with material in a similar state of plumage from S.W. Scotland, England and western Europe, and the criteria ascribed to *Emberiza citrinella caliginosa* in the original description are still quite apparent, despite extensive wear. My remark (Ibis, 1943, p. 89), " Birds for comparison should be completing the autumn moult; specimens taken at a later date are of little value ", must now be modified on the production of this additional material from northern Scotland.

In the case of the breeding male *Emberiza citrinella caliginosa*, the head markings are of an intense glossy black colour—much darker than in fresh autumn skins—and serve at once to separate this race from the typical bird, which is quite dull in comparison. *Emberiza citrinella caliginosa* is a very much more heavily pigmented bird throughout, and the distinctions noted in the autumn plumage, instead of being lost in the breeding season, become more pronounced. This is equally true of females, which are richer and more heavily striated than examples in similar dress of *Emberiza citrinella citrinella* Linnæus, 1758 : Sweden.

Extension of Distribution of Heteropsar acuticaudus (Bocage), Jorn. Lisboa, ii. 1870, p. 345: Huilla, Angola.

Captain C. H. B. Grant and Lieut.-Colonel C. W. Mackworth-Praed sent the following note :—

In the Lynes collection from the south-eastern Belgian Congo, and now in the British Museum of Natural History, there is an adult male specimen of this Glossy Starling, collected at Upper Lufira River Valley, about lat. 10° 8′ S., long. 27° E., south-eastern Belgian Congo, on February 1, 1934 ; collector's no. 906. Sclater, Syst. Av. Æthiop. ii. 1930, p. 662, gives the distribution as Southern Angola to Ovampoland and the Okavango River.

On the exact Type-locality of Cisticola chiniana ukamba Lynes.

Dr. V. G. L. van Someren sent the following note :—

Messrs. Grant and Mackworth-Praed (Bull. B. O. C. lxii. 1942, p. 47), under the impression that Lynes had not given an exact type-locality for this race, proposed Simba. However, if we consult Lynes's paper, 'Ibis', Supplement, 1930, we find on page 17, and again on page 269, that Masongaleni is given as the type-locality. This is again repeated on page 670.

Letter to the Editor.

P.O. Box 1682, Nairobi.
October 20, 1942.

The Editor, Bull. B. O. C.

Dear Sir,

On page 44, Bull. B. O. C. vol. lxii., Messrs. Mackworth-Praed and Grant refer to a published record of mine on the breeding of *Hirundo atrocærulea* in Uganda (Ibis, 1916, p. 375). The following data were taken from the label attached to a specimen taken by my brother, Dr. R. van Someren :—"Male, breeding . . . 3 eggs, nest of '*puella*', lined rootlets and feathers of all sorts ; white eggs. Buzerinjovu, 7/5/12."

As I had no reason to doubt the accuracy of these data, they were published. I have observed the species on many occasions, but have no personal knowledge of its nesting habits. The data on the label suggest that the "*puella*" nest was being made use of, which is a possibility, but the evidence produced by Mackworth-Praed and Grant would indicate that my brother's observation is inaccurate.

Yours, etc.,

V. G. L. van Someren.

Correction.

In Mr. B. W. Tucker's paper, "Some Ornithological Trips on the Continent", *antea* p. 29, *Anthus spinoletta littoralis* (5 lines from bottom of page) should read *Anthus spinoletta spinoletta*.

Notice.

DATE OF NEXT MEETING.

This has not yet been decided upon. When it has been, Members will be notified.

23MAR1943
PURCHASED

PURCHASED
29 JUN 1943

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCCXLVII.

The four-hundred-and-forty-first Meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, S.W. 7, on Saturday, May 29, 1943, preceded by a luncheon at 1.30 P.M., in conjunction with the Annual General Meeting of the British Ornithologists' Union.

Mr. N. B. KINNEAR, the new President of the Union, took the chair at the luncheon, and Dr. A. LANDSBOROUGH THOMSON, Chairman of the Club, at the Meeting which followed.

Members of the Union present :—Major ANTHONY BUXTON ; R. PRESTON DONALDSON ; Mrs. RAIT KERR ; Mrs. M. L. LEMON ; Miss AVERIL MORLEY.

Members of the Club present :—Miss C. ACLAND ; Miss P. BARCLAY-SMITH ; Miss M. G. BEST ; G. BROWN ; H. P. O. CLEAVE ; C. J. DUFFIN ; Miss E. M. GODMAN ; Captain C.H. B. GRANT (*Vice-Chairman*) ; Dr. J. M. HARRISON ; P. A. D. HOLLOM ; Dr. E. HOPKINSON ; N. H. JOY ; N. B. KINNEAR ; D. LACK ; Miss E. P. LEACH ; Miss C. LONGFIELD ; Dr. G. CARMICHAEL LOW (*Editor*) ; Dr. P. R. LOWE ; J. D. MACDONALD ; Sir P. MANSON-BAHR ; P. H. MAXWELL ; T. H. NEWMAN ; H. J. R. PEASE ; Mrs. J. B. PRIESTLEY ; Miss G. M. RHODES ; W. L. SCLATER ; D. SETH-SMITH ; Col. R. SPARROW ; Dr. A. LANDSBOROUGH THOMSON (*Chairman*) ; Mrs. W. BOYD WATT ; H. F. WITHERBY.

Guests :—Miss E. S. BARCLAY-SMITH ; Miss E. BEST ; R. CARTER ; E. FLACK ; Miss L. GODMAN ; Miss L. P. GRANT ; Miss M. PENROSE ; E. RUSSELL ; Lieut. J. SKIBICKI ; Mrs. SPARROW ; Mrs. LANDSBOROUGH THOMSON.

No Meetings of the Club took place in March or April.

Members of the Union, 5; Members of the Club, 31; Guests, 11; Total, 47.

Major Anthony Buxton, D.S.O., D.L., showed a series of slides and films.

1. Red Deer and Blackcock, the latter at the "lek", taken in Argyllshire.
2. A roll depicting (i.) The mere at Horsey, Pochard, etc.; (ii.) Water-Rail; (iii.) the Sparrow-Hawk at its nest.
3. A roll of the Honey Buzzard.

These excellent pictures were much appreciated by the audience, and the Chairman thanked Major Buxton for the trouble he had taken in coming and showing them.

A new Race of the Indian Red-billed Leiothrix.

Mr. Hugh Whistler sent the following communication :—

According to Baker, in the 'Fauna of British India', 2nd edition, *Leiothrix lutea calipyga* inhabits the Himalayas from Simla to E. Assam. On examining my own series with that in the British Museum I find specimens from Kumaon westwards can be distinguished from Sikkim birds, while skins from Nepal, the type locality of *Bahilia calipyga* of Hodgson, are intermediate, but nearer to Sikkim examples than those from the western Himalayas. I therefore propose to distinguish these birds as

Leiothrix lutea kumaiensis*, subsp. nov.

Description.—Distinguished from *L. lutea calipyga* from Sikkim by the greyer and colder tinge of the green on the upper parts, the yellowish wash on the crown greener, less golden and restricted in extent, while the red on the outer edge of the inner primaries is reduced or absent.

Measurements.—Wing 73, bill from skull 14·5, tail 48 mm. Specimens examined: 19 of *kumaiensis* and 14 of *calipyga*.

Distribution.—Simla to Kumaon; west of Simla this race is far from common, though it has been recorded as far as Dharmsala by Hingston. There are several records for "Kashmir" but none of recent date.

Type.—Male. December 28, 1870. Dehra Dun, United Provinces. Collected by G. King, Brit. Mus. Reg. no. 1886.10.1.6902.

* The old name for the inhabitants of Kumaon.

A new Race of Sunbird from the Southern Belgian Congo.

Captain C. H. B. Grant and Lieut.-Colonel C. W. Mackworth-Praed sent the following description :—

Cyanomitra verticalis bannermani, subsp. nov.

Description.—Differs from *Cyanomitra verticalis böhndorffi* (Reichenow) and *Cyanomitra verticalis viridisplendens* (Reichenow) in having the chin and throat duller matt metallic steel blue with greenish reflections. The bill is also shorter.

Distribution.—Southern Belgian Congo (Kayoyo, Lualaba River and Lufupa River).

Type.—In the British Museum. Male adult. Kayoyo, southern Belgian Congo, September 1, 1933. Collected by Rear-Admiral H. Lynes ; collector's no. 276.

Measurement of type.—Wing 71, culmen from base 25, tail 50, tarsus 17 mm.

Remarks.—Four adult males examined. No females or young birds examined. The three other males measure : wing 70–72, culmen from base 22–25, as against 26–29 mm. in *C. v. böhndorffi* (thirteen adult males) and 25·5–30 mm. in *C. v. viridisplendens* (twenty-six adult males).

Named in honour of Dr. D. A. Bannerman, who has remarked on the labels of these specimens that they probably represent a new race, and desires that we should give it a name.

A new Race of Green Pigeon from Northern Rhodesia.

Mr. C. M. N. White sent the following description of a new race of Green Pigeon from Northern Rhodesia :—

Vinago australis clayi, subsp. nov.

Description.—Nearest to *Vinago australis chobiensis* Roberts of western Northern Rhodesia, but with the back and scapulars dark olive-green, without the greyish wash found in *V. a. chobiensis*. Differs from *V. a. wakefieldii* (Sharpe) of coastal Kenya Colony in its larger size and from *V. a. salvadorii* Dubois in the yellower head and under surface and in the tail colour, which resembles *V. a. chobiensis*, and is not slate as in *V. a. salvadorii*.

Wing measurements.—4 males 174–180, 1 female imm. 169 mm., against 145–155 in *V. a. wakefieldii* and 155–175 mm. in *V. a. salvadorii*.

Type.—Male adult. Collected at Isoka, Northern Rhodesia on February 15, 1943, by my African collector, Kabali Muzeya. In my collection. Wing 180 mm.

Named after Mr. G. Clay, District Commissioner, Isoka, who made it possible for my collector to make a small but interesting collection at Isoka.

Material.—2 males, 1 female, Isoka ; 2 males, Mpika. In addition, in studying the Green Pigeons of Northern Rhodesia I have examined the following material of these races:—

V. a. chobiensis : Chobe River, 1 ; Machili River, 5 ; Monze, 1 ; Lusaka, 1 ; Mwinilunga, 4 ; Kasenga, Luapula River, 1. *V. a. schalowi* : 2 ; *V. a. wakefieldii* : 1.

Remarks.—This new race is at present known to me from the two localities from which I have examined material ; in addition, the Green Pigeons mentioned by Pitman ('Faunal Survey of Northern Rhodesia', 1934, p. 208) as seen at Kasama and Chinsali no doubt were the same race. I have so far failed to find any evidence of more than one race of Green Pigeon in any single locality, and incline to Chapin's view in his 'Birds of the Belgian Congo', vol. ii., that most of them are conspecific. The new form, whilst retaining the head, underside and tail of *V. a. schalowi* and *V. a. chobiensis*, approaches *V. delalandii* (Bonaparte) in the colour of the back and scapulars, but is darker, less yellow-green on those parts. Care should be taken in comparing Green Pigeons to ensure that comparisons are made with adult birds.

I must also thank Mr. R. Moffat, who enabled the specimens to be collected at Mpika.

A new Race of Brown-capped Weaver.

Dr. D. A. Bannerman sent the following note on the Brown-capped Weaver-bird inhabiting the highlands west of Kumbo, 7000–9000 ft., of the Cameroons, which he proposed to distinguish as

Phormophlectes insignis okuensis, subsp. nov.

Description.—Separable from *P. insignis insignis* on account of its darker under parts, which are dull olive-yellow instead of bright golden yellow.

Distribution.—Cameroon highlands above Oku, 7000–9000 ft.

Type.—Female. Oku, west of Kumbo, 7000 ft., Cameroon highlands, February 11, 1925. G. L. Bates collection. Brit. Mus. Reg. no. 1926.8.8.561.

Remarks.—As pointed out by Bates in Bull. B. O. C. xlix. 1928, pp. 31–32, most of the species collected in the very high altitudes above Oku proved to be separable from the race living at lower altitudes in the same mountainous region.

See also Bull. B. O. C. xlvi. 1926, pp. 87–93, where other races from Oku have been described.

A new Race of the Greenfinch from the British Isles.

Mr. P. A. Clancey sent the following description of a new race of Greenfinch :—

As the direct result of a prolonged investigation into the status of European races of Greenfinch I find myself in a position to separate an additional form from the British Isles.

The distribution and range limits of European races are still imperfectly known, and only careful collecting in the early period of autumn, before the birds disperse, can help towards a more accurate understanding of racial differentiation in the species.

Chloris chloris restricta, subsp. nov.

Description.—Male adult, autumn. Nearest *Chloris chloris chloris* (Linnæus), 'Systema Naturæ', ed. x. i. 1758, p. 174; restricted type locality: Sweden—from which it differs by having the crown, nape and mantle duller brown, not so rufous; rump paler and greener; underside pale green, never so yellow; yellow wash on abdomen much reduced, and frequently replaced by green tinge; flanks paler brown. Generally very much paler and greener than the typical form, which is richly pigmented in comparison. Thirty examined.

Distribution.—Apparently confined to the Salisbury Plain area of Wiltshire, South England. See "Remarks".

Type.—Male, 1st autumn. Amesbury, Wiltshire, southern England, September 27, 1942. Moult. In my collection.

Material examined.—Chloris chloris chloris: long series from Sweden, Norway, Finland, Estonia, Denmark, Germany, France, N. Italy, U.S.S.R. and eastern England (Suffolk, Kent, Sussex, etc.).

Chloris chloris aurantiiventris: series from southern France.

Chloris chloris muhlei: series from Greece.

Chloris chloris harrisoni: series from S. W. Scotland.

Remarks.—Examples from Andover, Hampshire, in the collection of Colonel W. A. Payn, are nearest this form, and, indeed, one or two are quite inseparable.

Generally speaking, fresh autumn skins of this species are exceedingly scarce in most collections, and even where fresh material is available for comparison there is often no guarantee that the birds were indigenous to the locality in which they were obtained. This is abundantly true of those collected in Great Britain, where the native birds are largely sedentary, vast immigrations of continental visitants taking place in late autumn. The inability of most workers to differentiate between endemic British birds and continental immigrants is not surprising when the paucity of available fresh autumn (native) birds is brought into consideration.

Witherby, 'Handbook of British Birds', vol. v. 1941, p. 257, discusses the validity of *Chloris chloris harrisoni* Clancey, Ibis, 1940, p. 92: Thorntonhall, Lanarkshire, S.W. Scotland, on the strength of two males collected in Argyllshire. The birds were collected by Meinertzhagen on November 8, 1924, at Loch Gair, Argyll, and are correctly placed as *Chloris chloris chloris* (Linnæus) by Witherby. They are without doubt winter visitants from the Continent. The same is true of two males collected in Ross-shire by the late Mrs. A. C. Meinertzhagen.

A new Race of Coal-Tit from Northern Scotland.

Mr. P. A. Clancey sent the following description of a new race of Coal Tit :—

The Northern Scottish Coal Tit is now considered to represent a geographical form new to science, and for it I propose the name

Parus ater pinicolus, subsp. nov.

Description.—Nearest *Parus ater britannicus* (Sharpe & Dresser), but purer and darker grey on upper surfaces, not so washed with buff, and in this respect approximates closely to *Parus ater ater* Linnæus: underside as in *P. a. britannicus*, but flanks browner in colour, not so buff. Twenty-five specimens examined (five from the type locality.)

Distribution.—Northern Scotland: Caithness, Sutherlandshire, Ross-shire and Inverness-shire.

Type.—Male adult. Rothiemurchus Forest, Inverness-shire, northern Scotland, March 27, 1943. In my collection.

Material examined.—Parus ater britannicus: long series from south west Scotland and many districts of England.

Parus ater ater: Europe, from Sweden to Balkan Peninsula.

Remarks.—Col. R. Meinertzhagen in a letter dated December 31, 1942, states that he considers the northern Scottish bird to be distinct, but that he had only two specimens from northern Scotland for purposes

of comparison. The differences noted by Meinertzhagen agree closely with my findings.

Attention is drawn to my remarks on the northern Scottish bird in 'The Ibis', 1940, p. 95.

The Scottish Sky-Lark.

Mr. H. F. Witherby sent the following note :—

In the 'Bulletin' of our last meeting (vol. lxiii. p. 40) Mr. P. A. Clancey takes me to task for not commenting in the 'Handbook' on the separation of Scottish Sky-Larks by Tschusi in 1903. This is a very old question which I considered as settled by Hartert in 1905 (long before the publication of the 'Practical Handbook'—much more the present 'Handbook'). Hartert discussed the separation in his great work on Palæarctic birds and refused to accept it. He agreed that British birds were inclined to be dark and rust-coloured, but pointed out that in the huge collection of Sky-Larks at Tring there were so many entirely similarly coloured birds from the European continent that a separation would not be of any advantage ('Die Vögel der paläarktischen Fauna', vol. i. pp. 245–246). No doubt Mr. Clancey has larger Scottish material, but unfortunately the wonderful continental series formerly at Tring is not now available.

If one took the extreme view of separating races on slight differences no doubt Sky-Larks all over their range could be split into a vast number of races. Mr. Clancey threatens us with further splittings of the bird in this country, and I should like to express the view that to name local groups of such birds with a continuous range in a small area like the mainland of Great Britain can but lead to great confusion. That there are these slight local differences is a matter of interest; but if such groups all through the range of a species were to be named and acknowledged as subspecies we should in many cases have such a confused mass of subspecies of unequal merit that the trinomial system would cease to be of value.

On the Races of Onychognathus morio Linnaeus.

Dr. D. A. Bannerman sent the following note :—

In the last number of the 'Bulletin', vol. lxiii. 1943, p. 54, Messrs Grant and Mackworth-Praed discuss the races of *Onychognathus morio* and give their views as to which races should be recognized, and the ranges of each. In the first place they correctly give the characters which distinguish *O. morio rüppellii* (Verr.) and *O. morio neumanni* (Alex.).

They include in the range of *O. m. rüppellii* " the Sudan ", and in a note under *O. m. neumanni* remark :—" Does not occur in Southern Sudan ; the race in that area being *O. m. rüppellii*."

Now in that assertion I disagree. Sclater was perfectly right when he pointed out that the birds collected by Rear-Admiral Lynes in Darfur should be allied with *O. m. neumanni* and are not *O. m. rüppellii* (see Lynes, Ibis, 1924, p. 654, footnote). They have the shorter bill and distinctly more arched culmen of *O. m. neumanni*.

I would therefore omit Sudan from the range of *O. m. rüppellii* and would give the range of *O. m. neumanni* as Northern Nigeria and northern Cameroon, east to Darfur and Ubangi Shari. Moreover, Messrs. Grant and Mackworth-Praed in their review have overlooked *Onychognathus morio modicus* Bates, Bull. B. O. C. liii. 1932, p. 7 : French Sudan, a perfectly good race.

Notes on Eastern African Birds.

Captain C. H. B. Grant and Lieut.-Colonel C. W. Mackworth-Praed sent the following four notes :—

(1) On the Relationship, Status and Distribution of *Egretta garzetta* (Linnæus) and *Egretta gularis* (Bosc).

In the Bull. B. O. C. liii. 1933, p. 189 ; liv. 1933, p. 73 ; and lix. 1938, p. 24, we discussed the races and colour phases of these Egrets.

In the ' Bulletin du Muséum Paris ', 2nd ser. x. no. 6, 1938, p. 570, J. Berlioz and R. Rousselot take up this interesting question. The table on p. 571 enumerates twelve specimens, but there is no indication to which species or races these specimens should be assigned.

Judging by the descriptions, nos. 6, 8, 11 and 12 should be *Egretta garzetta garzetta* and the others are all probably *Egretta gularis*. They confirm that young birds have a less intensely coloured bill than the adults. The interesting fact is brought out that the Egrets are on the Niger River between August and March and in the other months on the seaboard, but which species is not stated. This appears to be a movement both in the breeding and non-breeding seasons, and it is therefore important to establish whether this is a movement of *E. garzetta* or of *E. gularis*. Some such interesting movement may also occur elsewhere in Africa.

The authors cast some doubt on our findings, but they do not suggest any alternative arrangement. It would appear that they had not seen our last note in the 1938 ' Bulletin '. We would invite attention to Pakenham, Ibis, 1943, p. 169, who records both white and coloured birds at the same breeding colony in Zanzibar and Pemba, and this

confirms the record for Madagascar (Bull. B. O. C. liii. 1933, p. 190), on which we based some of our conclusions.

(2) On the Races of *Onychognathus morio* (Linnæus).

With reference to Dr. D. A. Bannerman's note in this number of the Bull. B. O. C., we agree with him that *O. m. neumanni* (Alexander) occurs in the western Sudan. Our note is unfortunately worded and should have read "On the Races of *Onychognathus morio* (Linn.) occurring in Eastern Africa", and "We therefore recognize four races in Eastern Africa". Under *O. m. rüppellii* (Verreaux) the distribution should read :— "Sudan (except western area) and Abyssinia to Mt. Elgon (foothills), Kenya Colony and Tanganyika Territory", and under *O. m. neumanni* the distribution should read "Northern Nigeria and northern Cameroon to French Equatorial Africa and the western Sudan". Our note under this race refers only to the southern Sudan.

We did not mention *O. m. modicus* Bates, as it has nothing to do with Eastern Africa, to which area we had meant to restrict our remarks.

We regret the misleading wording of our note and hope the above will make the matter more clear. We thank Dr. Bannerman for publishing his note.

(3) On the Distribution of *Zosterops pallida* Swainson and its Races.

We must first invite attention to the dates of *Z. pallida*, 1838, and *Zosterops capensis* Sundevall, 1850, and that these names have been transposed by Roberts, Bds. S. Afr. 1940, p. 330. We agree with Roberts that these are races of each other, and on examining specimens of *Zosterops winifredæ* Moreau, *Zosterops poliogastra* Heuglin, and *Zosterops simplex* Swinhoe, we have come to the conclusion that all can be placed as one species. *Zosterops simplex* is very close indeed to *Zosterops capensis* in general characters, and they should be considered as conspecific. The grouping we propose is as follows :—

Zosterops pallida pallida Swainson, Anim. Menag. 1838, p. 294 : Southern Africa.

Distribution.—Valleys of Orange (but not Lower Orange River) and Vaal Rivers.

Zosterops pallida capensis Sundevall, Œfv. K. Sv. Vet.-Akad. Förh. vii. 1850, p. 102 : Rondebosch, near Cape Town.

Distribution.—Cape Peninsula to Olifants River, Knysna and Uitenhage.

Zosterops pallida poliogastra Heuglin, Ibis, 1861, p. 357, pl. 13 : Highlands of Abyssinia.

Distribution.—Lake Tana and Tigré to Shoa and Gofa.

Zosterops pallida simplex Swinhoe, P. Z. S. 1863, p. 203 : Canton, China.

Other eastern races recognized as belonging to *Z. simplex* would also be attached to *Z. pallida*.

Distribution.—India and Ceylon to Burma and China ; also Laccadives, Andamans and Nicobars.

Zosterops pallida atmorii Sharpe, in Layard's Bds. S. Afr. 2nd ed. 1877, p. 326 : Grahamstown, Cape Province.

Distribution.—Eastern Cape Province from Port Elizabeth to King William's Town.

Zosterops pallida deserticola Reichenow, Vög. Afr. iii. 1905, p. 433 : Lower Orange River, south-west Africa.

Distribution.—South-west Africa.

Doubt is thrown on this race by Sclater, Syst. Av. Æthiop. ii. 1930, p. 677.

Zosterops pallida winifredæ Sclater & Moreau, Bull. B. O. C. lv. 1934, p. 14 : Chome, Paré Mts., north-eastern Tanganyika Territory.

Distribution.—North-eastern Tanganyika Territory.

Zosterops pallida basuticus Roberts, Ann. Trans. Mus. xviii. 3, 1936, p. 256 : Mamathes, Basutoland.

Distribution.—Basutoland, South Africa.

Zosterops silvanus Peters & Loveridge differs from *Z. p. winifredæ* in having a large broad white eye-ring and a bright yellow edge to the wings. This broad eye-ring is the specific character that distinguishes the *Z. virens* group from the *Z. euricricotus* and *Z. kikuyuensis* groups, and this being so, we consider that *Z. silvanus* is better left as a species and not placed as a race of *Z. pallida*, and *Z. winifredæ* and *Z. silvanus* may yet be found to occur together.

(4) Extension of distribution of *Cinnyris oustaleti* (Bocage), J. Lisboa, vi. 1878, p. 254 : Caconda, Benguella, southern Angola.

In the collections of A. M. Chapman presented to the British Museum of Natural History there is a male of this bird which was collected at Mwenzo, north-eastern Northern Rhodesia, on August 18, 1938.

This specimen is in non-breeding dress ; it has the mixed orange and yellow pectoral tufts and the maroon tips to the metallic chest feathers. The bill is also shorter than that of males of *Cinnyris talatala* A. Smith.

The distribution of *Cinnyris oustaleti* is, therefore, from southern Angola to north-eastern Northern Rhodesia, and the proximity of Mwenzo to

the Northern Rhodesia–Tanganyika Territory boundary suggests that it may occur in the latter area between the south end of Lake Tanganyika and the north end of Lake Nyasa.

The Subspecific Status of Northern Scottish Fringilla coelebs Linnaeus.

Mr. P. A. Clancey sent the following note :—

Fresh autumn birds collected in Sutherlandshire in 1938 were tentatively assigned to the typical form, *Fringilla cœlebs cœlebs* Linnæus, 1758 : Sweden (see Ibis, 1940, pp. 93, 94).

Breeding birds from Sutherlandshire collected in June 1942 are clearly referable to the British form, *Fringilla cœlebs gengleri* Kleinschmidt, 1909 : England *. The majority of skins in the series (8) are on the whole paler and brighter below than most examples of *T. c. gengleri*. This paleness is most noticeable in the fresh autumn dress, but without extensive material from the extreme north of Scotland its significance cannot be appreciated at the present time.

On the Race of Regulus regulus (Linnaeus) occurring in Sutherlandshire.

Mr. P. A. Clancey sent the following note :—

I have examined a series of moulting autumn birds collected in August and early September 1938 in the natural pine forest of south-east Sutherlandshire. These birds have been compared with birds of similar date from S.W. Scotland, North, South and East England and the Continent. They agree closely with the continental race *Regulus regulus regulus* (Linnæus) in the greyness of their napes, and are readily separable from the much darker and more golden *Regulus regulus anglorum* Hartert.

As the continental passage migrants do not generally arrive before the third week of September, and many of the Sutherlandshire birds are in full moult, it is safe to assume that the birds collected represent the native breeding population of this part of Scotland.

Three examples collected in the Rothiemurchus Forest, Inverness-shire, in March 1943 appear to be intermediate.

* Ross-shire breeding birds (Meinertzhagen collection) have already been placed as *T. c. gengleri*, Ibis, 1943, p. 88.

On the Breeding Habits of Hirundo atrocaerulea Sundevall.

Colonel R. Sparrow sent the following note :—

With reference to Messrs. Grant & Mackworth-Praed's note in the Bull. B. O. C. lxii. 1942, p. 44, and van Someren's note in the 'Bulletin', lxiii., p. 58, all the nests I found in the highlands of Natal were open and cup-shaped and always in the roof of an Antbear hole. The eggs were not white, but were spotted like those of *Hirundo smithi smithi* Leach.

Notice.

The next Meeting of the Club will be held at the Rembrandt Hotel, Thurloe Place, S.W. 7, on Wednesday, June 30, 1943, following a dinner at 6.45 p.m. Dr. A. Landsborough Thomson, Chairman of the Club, will open a discussion upon "Physiological Races, with special reference to recent work by Bullough, Blanchard and others".

PURCHASED

BULLETIN OF THE BRITISH ORNITHOLOGISTS' CLUB.

No. CCCCXLVIII.

The four-hundred-and-forty-second Meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, S.W. 7, on Wednesday, June 30, 1943, following a dinner at 7 p.m.

Chairman : Dr. A. Landsborough Thomson.

Members present :—Dr. D. A. Bannerman ; F. J. F. Barrington ; Captain C. H. B. Grant (*Vice-Chairman*) ; B. G. Harrison ; Dr. E. Hopkinson ; N. B. Kinnear (*Hon. Sec.*) ; Miss C. Longfield ; Dr. G. Carmichael Low (*Editor*) ; Captain J. H. MacNeile ; Colonel R. Meinertzhagen ; Miss G. Rhodes ; W. L. Sclater ; D. Seth-Smith.

Guest of the Club : J. Sillem.

Guests :—Miss Theresa Clay ; Miss L. P. Grant.

Members, 14 ; Guest of the Club, 1 ; Guests, 2 ; Total, 17.

Discussion on "Physiological Races".

Dr. A. Landsborough Thomson, opening the discussion, said :—

Recent work has provided further facts about what have been called "physiological races". It has also aroused some controversy about the appropriate method of describing or naming them for purposes of reference, but that is, of course, a secondary consideration.

"Physiological races" are aggregations of individuals within a species which are differentiated not by morphological characters but by physiological characters, such as differences in their reproductive cycles and related behaviour. The latter may include not only sexual behaviour but also migratory behaviour. Indeed, the fact that migration may bring two such "races" into the same environment, without losing their differentiation, is one of the most significant points. It indicates

that the physiological differences are to some extent inherent, or at least dependent on the total environmental influences to which the birds are subject throughout the year. In what degree the rhythm of the cycle would be stable in the individual under a complete change of environment, or in what degree it may be a heritable quality, cannot be said with certainty.

Another point is that differences in the reproductive cycles may be a barrier to interbreeding. In that event there is effective segregation, and one might therefore expect some morphological differentiation to appear in course of time. There are, in fact, cases where both physiological and morphological differences have been recognized ; but it does not follow that the two sets of characters necessarily run parallel throughout the whole range of the species—there is evidence that they sometimes do not.

Wolfson * has given data relating to the one resident and four migratory subspecies of the Oregon Junco (*Junco oreganus*) found in winter at Berkeley, California. Residents and migrants differ in their reproductive cycles, although flocking together and subject for the time being to the same environment. The testes of the residents recrudesce earlier and faster : and at the time of departure in spring the migrants show a heavy deposit of fat not found among residents. In this case subspecific morphological differences had already been recognized, so that (at least in the particular locality) the question of purely physiological separation does not arise.

Also at Berkeley, Blanchard † has compared the resident and wintering migrant communities of the White-crowned Sparrow (*Zonotrichia leucophrys*). The adult residents stay permanently paired on territories, and the young begin to mate in January. The migrants wintering there remain in huge flocks till departure in April. Recrudescence of the gonads is earlier in the residents ; the prenuptial moult is slight and the birds never acquire much fat. In the migrants the moult is intensive and the birds become very fat before departure. The song-patterns of the two aggregates are distinct.

Contrasts in behaviour were also found between the residents breeding at Berkeley and the migrants breeding at Friday Harbour, Washington, a thousand miles to the north, where the species is found only in summer. Between these extremes a complicated intermediate state of affairs was found near the northern limit of the winter range.

The southern birds belong to the subspecies *Z. l. nuttalli*, and the

* A. Wolfson, ' Condor ', xliv, p. 237 (1942).
† B. D. Blanchard, ' Auk ', lix, p. 47 (1942).

northern to *Z. l. pugetensis*. The author suggests that the slight colour-differences on which this separation is based are less important than the differences in physiology and behaviour which she describes. Moreover, the transition from subspecies to subspecies, as morphologically understood, does not coincide geographically with the transition in the other respect.

Bullough * has shown that significant differences exist in the times and rates of growth of the testes and ovaries of the Starling (*Sturnus vulgaris*), between British resident birds and Continental birds wintering in the British Isles. As a result of the earlier beginning and more rapid progress of gonad development in the resident birds, the accessory sexual organs and the secondary sexual characters (notably colour of beak) undergo changes which are not seen in the wintering migrants until much later.

The residents pair in autumn and show many trains of sexual behaviour during the winter, including attachment to nesting sites rather than to communal roosts. The winter visitors exhibit no sexual behaviour during their stay in this country except that the males sing in early March, and they continue to roost communally up to the time of departure. The same is true of migrants wintering on the Continent.

As the migrants do not pair until they return to their breeding area, there is effective segregation from the British resident birds with which they mingle here in winter. There is also a suggestion, difficult to prove, that the two stocks have preserved their identities after introduction into North America.

These examples will serve to illustrate the general points mentioned at the beginning. Various problems of biological interest are obviously involved. On the secondary question, it may be urged that " physiological races " are facts of nature, and that their due recognition as such may necessitate some convenient method of designation. Most ornithologists will probably agree, however, that the existing conventions of systematic nomenclature cannot be appropriately used for this purpose—for reasons which other speakers will doubtless give—and even the term " race " may be open to objection.

Mr. H. F. Witherby, who was unable to attend the meeting, sent the following remarks :—

While recognising the importance of " physiological races ", I hope systematists on Wednesday will protest against the name *Sturnus vulgaris britannicus* and the use of the trinomial system for such

* W. S. Bullough, Phil. Trans. Roy. Soc. Lond. B, ccxxxi, p. 165 (1942).

forms. There is no external distinguishing character, and the difference is only a difference in the time of development of characters common to all—there is no qualitative difference. How is a systematist to distinguish them ? The Linnæan system and the trinomial extension of it are for systematists. Biologists must invent some other distinct system to label such " races ".

Doubtless there are many birds in which comparable differences of time exist in northern and southern or other populations. I have little doubt that Starlings themselves could be divided into many more such " races ". For instance, Bullough lumps all our continental immigrants, but if these periods of change could be split up doubtless those breeding in Holland, for instance, would be found to change before those breeding in N. Norway or Prussia or Russia. We might be inflicted with a name for each weekly or fortnightly group.

In our ' Handbook ' Supplement we definitely make this *S. vulgaris britannicus* a synonym.

Dr. G. Carmichael Low, who read Mr. Witherby's remarks to the meeting, said he agreed with him that physiological forms should not have systematic names applied to them. Further work on such forms was necessary before naming them ; and if after that they were found to be good and could be separated, then some other system of nomenclature would have to be adopted, as Mr. Witherby had said. Dr. Bullough had dealt with Starlings in Yorkshire only, but if birds in the south of England, which bred earlier than those in the north of Scotland, for example, had their gonadal development compared, it was almost certain that it would differ. It would be interesting also to see how *Sturnus v. zetlandicus* behaved. Personally he (Dr. Low) was not convinced that all the Continental Starlings that came over to England in winter returned to the Continent in spring. Granted that this was so, what became of those that remained, did they breed with British birds or with themselves, and did the environment change their breeding habits ? The British breeding Starlings, according to ringing returns, are said to be largely stationary—or even entirely sedentary (Bullough)—and not to migrate. How explain the following then ? :—In my diary for 1931 I have the note, Saturday, September 19, 1931, " On the road from Lydd to Rye Harbour behind the Midrips a great migration on. Swallows pouring south and enormous numbers of Starlings. At one place the telegraph wires and posts were blackened with them. Wheatears also on the move, and most bushes had Warblers in them." I take it these Starlings were preparing to push south across the Channel, especially so

as most of them were all facing south. It is possible, of course, that they were Continental birds from the N.E. just passing through the south of England on their way further south. There was no evidence that they were coming the reverse way from France to England for the winter.

These physiological researches, Dr. Low said, were very interesting, and experimental work might help materially.

Why not collect these Continental birds in winter, keep them in a large aviary, with breeding holes in stumps of trees, etc., and see what happens? Will the environment change their habits and gonadal development? Will they breed (*a*) with themselves, or (*b*) with English resident ones? These points would help to clear the matter up, and, as I have said, until more work on the subject has been done it is to be hoped that no new systematic names will be employed for such races, as this can only cause endless confusion. Once such a name is given it has to stand.

Dr. D. A. Bannerman said he would like to endorse Mr. Witherby's communication, which had been read to the meeting by the Editor in his absence. While agreeing with the Chairman as to the undoubted importance of physiological characters, where such were proved to exist, as Dr. Bullough had shown to be present in the Starling which bred in Great Britain, he did not consider it advisable to give any special designation to the members of such a community. Apart from drawing attention to the fact, he believed that any attempt to label them would court disaster, and was best left alone. As to employing the Linnæan system of nomenclature to designate a group such as the British Starlings, he considered that Dr. Bullough had done a great disservice to zoology by giving a Latin name to these birds. It was an unfortunate example to set, and he could not condemn too strongly his action in employing the trinomial system to that end. If this procedure was followed the result would be chaos. Where individual races inhabited a wide area as, for instance, in Africa, climate and environment played no small part in governing their breeding time with consequent physiological changes taking place in the bird population in different areas at different seasons. Were we to give all these birds different names? Take, for instance, the Grass Warblers (*Cisticola*) living near the Equator, where the rains are persistent, which have only one " perennial " dress, moulting at the end of the year, whereas the same birds living to the north and to the south have the normal winter and summer dress, moulting regularly twice a year. Are we to saddle these communities, showing such differences, with " physiological names ". Such cases could be multiplied almost without limit. These are all very interesting and instructive facts

to record, though it is by no means a new discovery that they exist, but it was a very new and unfortunate departure in Ornithology to employ the Linnæan system to establish their identity.

Dr. Bannerman said that he had been surprised that the Royal Society —our premier scientific society—had agreed to publish in its 'Philosophical Transactions' a new scientific name which had not been presented in accordance with modern usage, in that no type-specimen had been designated. The Editors of the British Ornithologists' Club's 'Bulletin' and of 'The Ibis' rightly insist on the observance of this procedure, and it is unfortunate that the distinguished editor who had accepted Dr. Bullough's communication had not been equally exacting.

Col. R. Meinertzhagen said the discussion had centred round breeding cycles, and it is rather unfortunate that the Starling has been selected as the type of physiological characters, for I think it can be argued that those characters which Bullough gave for his race are, in fact, morphological (differences in throat feathers and earlier development of gonads). But that does not lessen the importance of physiological characters which really rest on a much wider basis.

Physiological characters are fundamentally more important than morphological characters, but I doubt if they have any taxonomic value, because they are susceptible to environmental conditions. Systematists demand a recognizable morphological character, and our present trinomial system is unsuited to physiological characters. That does not mean that we must not recognize and devise some means of classifying physiological characters, though to do so by the modern trinomial system would entail hopeless confusion.

A morphological character is but the visible form of a physiological character and it seems doubtful if any morphological character occurs without a physiological basis, for physiology is function and morphology is form, and function does in the main regulate form.

A physiological character dies with the specimen and cannot be preserved except on the label or in notes. The skin of a bird is but a part of the bird and not the most important part. This makes it more than ever necessary that the man who makes a collection in the field should work out his own specimens, and that the museum systematist should himself obtain the material on which he works. The study of habit and environment must be coupled with taxonomy. I believe that the true differences between species are physiological, and that these have been largely neglected by systematists is due to the fact that physiological characters are lost in the dried or preserved specimen, and also to the

fact that many of our systematists are museum naturalists pure and simple.

Physiological characters will have to be taken into account in future. They are field characters and can only be studied in the field. This makes it imperative that no systematist should monograph a group without having studied it in the field. Lynes realised this and practised it. In many difficult groups captivity specimens can help, and a greater use could be made of living specimens at the Zoo in Regent's Park.

Physiological characters are closely related to both morphological characters and ecological variations, and in some cases these are inextricably interwoven.

Take the case of *Loxia pytyopsittacus*, which I regard as an ecological form of *Loxia curvirostris*. The heavier bill is a morphological character produced by ecology but with a physiological basis.

How are we to regard the Cuckoo, which may have one community favouring parasitism on the Meadow Pipit and another on the Reed Warbler ? Adult Cuckoos would be identical, but eggs and habit and habitat would be different. In the bird the character would be physiological and in the egg the character would be morphological.

Then we have many birds which are indistinguishable in winter plumage and identifiable in breeding plumage, a physiological form in winter and a morphological form in summer.

The cases of migratory and non-migratory communities within the same species is legion, all physiological and some directly due to ecology.

If it were not for physiological characters, should we regard the Marsh and Reed Warbler (*Acrocephalus palustris* and *scirpaceus*) as anything but ecological forms ? The same applies to Marsh and Willow Tits (*Parus palustris* and *atricapillus*).

In the Anophelene group of Mosquitoes we find adults with no morphological characters but with recognizable differences of a morphological character in the early stages of development, even down to the eggs, and in the adults such important physiological characters as some being carriers of malaria and others not. These have been named trinomially.

Many bacteria are probably physiological races and bear names, the microbe (in the case of the common cold) being apparently identical though having different incubation periods and infecting their victims with slightly different types of cold or influenza. In viruses we only know the physiological characters.

As typical physiological races we have the Chaffinch in Russia with two different types of song in two distinct areas (Promptoff, Biol. Zbl.

l, 1930), we find the Raven (*Corvus corax*) of western Europe with a different note to those of Asia, Jackson's Francolin has a quite different call on the top of Mount Kenya to what it has at 4,000 feet in the Aberdare Mountains, and the Black Partridge (*Francolinus francolinus*) of the Himalayas has a call so different to that of Persia and Iraq that one would never recognize it as the same bird. Among certain fungi parasitic on Conifers species unrecognizable on morphological characters can be split up into species by their specialization in parasitism, for among parasites the host is the most important factor in environment.

Then we have the important factor of isolation which, among birds, we are apt to look on in terms of geography only, such as physical barriers or ecological tolerances. There are also, just as important, physiological barriers, barriers to interbreeding from physiological causes (different timings in genital development), and in the insect group Mallophaga almost complete identity in adults except for easily recognizable differences in genital armature ; and, finally, there is genetic isolation such as difference in chromosomes.

I think we owe a great debt to Dr. Bullough for introducing ornithologists to this most interesting subject, which is new to many of us. Do not let us discard it as a nuisance, because it may upset our systematics, this new light on variation which, far from cramping our style, will enhance our interest in systematic and field ornithology.

Mr. W. L. Sclater and Mr. N. B. Kinnear also spoke.

The Chairman, summing up, said he thought the discussion had been interesting and useful. Colonel Meinertzhagen had widened its scope in a valuable way in respect of physiological differences other than those of reproductive cycle and migration. On the subsidiary issue there had been the expected agreement that the application of systematic nomenclature to " physiological races " was undesirable.

Notice.

The next Meeting of the Club will be held in October, after the Annual General Meeting. Members will be notified of the date, place and time when the Notices and Agenda for this are sent out.

INDEX

[Names of new species and subspecies are indicated by clarendon type under the generic entry only ; vernacular, or common, names are shown in ordinary type.]

abbotti, Chlorophoneus, 24, 25, 26.
abyssinica, Lamprotornis chrysogaster, 55.
Acanthis cabaret, 34.
Accentor, Alpine, 29.
Acridotheres tristis, 35.
Acrocephalus palustris, 79.
—— *scirpaceus*, 79.
acuticaudus, Heteropsar, 58.
Aëthocorys personata, 10.
—— —— *intensa*, 10.
afer parvirostris, Parus, 43.
affinis, Barbatula, 20.
——, *Corvinella*, 22.
——, *Pogoniulus pusillus*, 19, 20.
——, *Sitta europæa*, 56.
Alauda arvensis arvensis, 35, 40, 41.
—— —— *cantarella*, 41.
—— —— *scotica*, 39, 40, 41.
alba, Egretta, 32.
Albatross, 31, 32.
——, Royal, 5, 36, 39.
albicilla, Mohoua, 33.
albicollis, Corvultur, 47.
albicrissalis, Bradypterus alfredi, 28.
albistriata, Chlidonias, 32.
albosignata, Eudyptula, 31.
alchata, Pterocles, 30.
alfredi albicrissalis, Bradypterus, 28.
——, *Bradypterus alfredi*, 28.
alius, Malaconotus, 28.
Amydrus montanus, 55.
—— *morio shelleyi*, 54.
—— *neumanni*, 55.
—— *rüppellii*, 54.
Anarhynchus frontalis, 32.
Anas gibberifrons, 32.
—— *platyrhynchos*, 34.
—— *querquedula*, 30.
—— *superciliosa*, 34, 37.
anglorum, Regulus regulus, 71.
angolensis, Hirundo, 20, 21.
ansorgei rhodesiæ, Anthoscopus, 45.
Anthornis melanura, 33.
Anthoscopus ansorgei rhodesiæ, 45.
—— *caroli*, 45.
—— —— *rothschildi*, 46.
—— —— *sharpei*, 46.
—— —— *sylviella*, 46.
—— *roccatii robertsi*, 46.
—— —— *roccatii*, 45, 46.
—— —— *taruensis*, 46.
Anthreptes collaris djamdjamensis, subsp. nov., 16.
—— *collaris elachior*, 16.
—— —— *garguensis*, 16.
—— —— *jubaensis*, 16.
—— —— *teitensis*, 16.
—— —— *ugandæ*, 16.
Anthus caffer australoabyssinicus, subsp. nov., 12, 13.
—— —— *blayneyi*, 12, 13.
—— *novæzeelandiæ*, 33.
—— *pratensis pratensis*, 6.
—— —— **whistleri**, subsp. nov., 6.
—— *spinoletta littoralis*, 29, 59.
—— —— *petrosus*, 41, 42.
—— —— **ponens**, subsp. nov., 41.
—— —— *spinoletta*, 59.
antipodes, Megadyptes, 31.
approximans, Archolestes, 28.
Apteryx haasti, 33.
—— *lawyri*, 33.
—— *mantelli*, 33.
—— *oweni*, 33.
Apus melba, 30.
Aquila chrysaëtos, 30.
arabicus, Cinnyricinclus leucogaster, 7.
Archolestes approximans, 28.
arcticincta, Hirundo, 21.

armenus, Pomatorhynchus senegalus, 49–50.
arnaudi australoabyssinicus, Pseudonigrita, 19.
—— *kapitensis, Pseudonigrita*, 19.
——, *Pseudonigrita arnaudi*, 19.
arvensis, Alauda arvensis, 35, 40, 41.
—— *cantarella, Alauda*, 41.
—— *scotica, Alauda*, 39, 40, 41.
ater britannicus, Parus, 66.
——, *Parus ater*, 66.
—— *pinicolus, Parus*, 66.
athensis, Calandrella, 10.
atmorii, Zosterops pallida, 70.
atrata, Chenopis, 34.
atricapillus, Parus, 79.
atrocærulea, Hirundo, 58, 72.
aurantiiventris, Chloris chloris, 65.
auriceps, Cyanoramphus, 33.
australis chobiensis, Vinago, 63, 64.
—— *clayi, Vinago*, 63.
—— *congener, Pomatorhynchus*, 24.
—— ——, *Tchagra*, 24.
—— *dohertyi, Telephonus*, 24.
—— *emini, Tchagra*, 24.
—— ——, *Telephonus*, 24.
——, *Gallirallus*, 33.
—— *littoralis, Harpolestes*, 24.
—— ——, *Tchagra*, 23, 24.
—— *minor, Tchagra*, 24.
——, *Miro*, 33.
—— *salvadorii, Vinago*, 63.
—— *schalowi, Vinago*, 64.
——, *Tchagra australis*, 23.
—— *wakefieldii, Vinago*, 63, 64.
australoabyssinicus, Anthus caffer, 12, 13.
——, *Mirafra pœcilosterna*, 13.
——, *Pseudonigrita arnaudi*, 19.
——, *Turdus tephronotus*, 13.
——, *Zosterops senegalensis*, 15.

Bahilia calipyga, 62.
bannermani, Cyanomitra verticalis, 63.
Barbatula affinis, 20.
—— *pusillus lollesheid*, 20.
—— *uropygialis*, 20.
barbatus, Gypaëtus, 30.
basuticus, Zosterops pallida, 70.
baueri, Limosa lapponica, 31.
Bell-bird, 33.
bertrandi, Chlorophoneus rubiginosus, 25.
bicinctus, Charadrius, 32, 36.
Bittern, 32.
——, Little, 30.
Blackbird, 35.
Blackcock, 62.
blayneyi, Anthus caffer, 12, 13.
Bluethroat, White-spotted, 30.
böhndorffi, Cyanomitra verticalis, 63.
Botaurus poiciloptilus, 32.
Bradypterus alfredi albicrissalis, 28.
—— —— *alfredi*, 28.
brevirostris, Phalacrocorax melanoleucus, 36.
britannica, Sitta europæa, 57.
britannicus, Sturnus vulgaris, 75, 76.
—— *ater, Parus*, 66.
brittanica, Certhia familiaris, 42.
bulleri, Larus, 32.
Bunting, Cirl-, 35.
Buzzard, Honey, 62.

cabaret, Acanthis, 34.
cæsia, Sitta europæa, 56.
caffer australoabyssinicus, Anthus, 12, 13.
—— *blayneyi, Anthus*, 12, 13.
Calandrella athensis, 10.
californica, Lophortyx, 34.
caliginosa, Emberiza citrinella, 57.
calipyga, Bahilia, 62.
——, *Leiothrix lutea*, 62.
camerunensis, Tchagra senegalus, 49, 50.
canadensis whiteheadi, Sitta, 29.
cantarella, Alauda arvensis, 41.
capensis, Zosterops pallida, 69.
carbo sinensis, Phalacrocorax, 30.
Carduelis carduelis, 34.
carneipes, Puffinus, 31.
caroli, Anthoscopus, 45.
—— *rothschildi, Anthoscopus*, 46.
—— *sharpei, Anthoscopus*, 46.
—— *sylviella, Anthoscopus*, 46.
carunculatus, Creadion, 33.
Casarca variegata, 32.
caspia, Hydroprogne, 32.
catharoxanthus, Malaconotus, 26, 27.
catherinæ, Turdus ericetorum, 42.
catholeucus, Telephonus senegalus, 50.
Certhia familiaris brittanica, 42.
—— —— *familiaris*, 42.
—— —— **meinertzhageni**, subsp. nov., 42.
Chaffinch, 34, 42, 79.
——, Continental, 57.
chalconotus, Phalacrocorax, 32.
Charadrius bicinctus, 32, 36.
—— *dubius curonicus*, 30.
Chenopis atrata, 34.
chiniana ukamba, Cisticola, 58.
Chlidonias albistriata, 32.
Chloris chloris aurantiiventris, 65.
Chloris chloris chloris, 7, 34, 65, 66.
—— —— *harrisoni*, 7, 65, 66.
—— —— *muhlei*, 65.
—— —— **restricta**, subsp. nov., 65.

Chlorophoneus abbotti, 24, 25, 26.
—— *elegeyuensis*, 24, 25, 26.
—— *manningi*, 25, 26.
—— *münzneri*, 25, 26.
—— *nigrescens*, 25, 26.
—— *nigrifrons*, 24, 25, 26.
—— *rubiginosus*, 25.
—— —— *bertrandi*, 25.
—— *sandgroundi*, 25, 26.
chobiensis, Vinago australis, 63, 64.
chrysaëtos, Aquila, 30.
chrysocome, Eudyptes, 31.
chrysogaster abyssinica, Lamprotornis, 55.
Cinnyricinclus leucogaster arabicus, subsp. nov., 7.
—— —— *leucogaster*, 7.
—— —— *verreauxi*, 7.
Cinnyris oustaleti, 70.
—— *talatala*, 70.
Circus gouldi, 33.
cirlus, Emberiza, 35.
Cisticola, 77.
—— *chiniana ukamba*, 58.
citrinella caliginosa, Emberiza, 57.
——, *Emberiza citrinella*, 35, 57.
clayi, Vinago australis, 63.
cœlebs, Fringilla cœlebs, 34, 42, 57, 71.
—— *gengleri, Fringilla*, 71, 90.
colchicus, Phasianus, 34.
collaris djamdjamensis, Anthreptes, 16.
—— *elachior, Anthreptes*, 16.
—— *garguensis, Anthreptes*, 16.
—— *jubaensis, Anthreptes*, 16.
——, *Prunella*, 29.
—— *teitensis, Anthreptes*, 16.
—— *ugandæ, Anthreptes*, 16.
Columba livia, 34.
congener, Pomatorhynchus australis, 24.
——, *Tchagra australis*, 24.
cooki, Laniarius ruficeps, 23.
Cookilaria, 37, 39.
coqui maharao, Francolinus, 10.
corax, Corvus, 80.
—— *edithæ, Corvus*, 53.
Cormorant, Southern, 30.
corone, Corvus, 52.
Corvinella affinis, 22.
Corvultur albicollis, 47.
Corvus corax, 80.
—— *corone*, 52.
—— *edithæ*, 52, 53.
—— *frugilegus*, 35.
—— *ruficollis*, 52, 53.
Crake, Spotless, 33.
Creadon carunculatus, 33.
Cuckoo, 79.
——, Long-tailed, 31.
——, Shining, 31.
curonicus, Charadrius dubius, 30.
cuvieri, Falco, 9.
cyanecula, Luscinia svecica, 30.
Cyanomitra verticalis bannermani, subsp. nov., 63.
Cyanomitra verticalis böhndorffi, 63.
—— —— *viridisplendens*, 63.
Cyanoramphus auriceps, 33, 90.
—— *novæzelandiæ*, 33.

Dabchick, 36.
delalandii, Vinago, 64.
delamerei, Pseudalæmon, 10.
Demigretta sacra, 32, 36.
deserticola, Zosterops pallida, 70.
Diomedea epomophora sanfordi, 5, 32, 36.
—— *regia*, 5.
djamdjamensis, Anthreptes collaris, 16.
docilis, Pyrrhocorax pyrrhocorax, 54.
dohertyi, Telephonus australis, 24.
domesticus, Passer, 35.
dominicanus, Larus, 32.
Dotterel, Banded, 32, 36.
——, New Zealand, 32.
Dryoscopus ruficeps, 23.
—— —— *kismayensis*, 23.
—— *rufinuchalis*, 23.
dubius curonicus, Chadrius, 30.
Duck, Blue, 32.
——, Grey, 37.
——, Paradise, 32.

Eagle, Golden, 30.
edithæ, Corvus, 52, 53.
Egretta alba, 32.
—— *garzetta garzetta*, 68.
—— *gularis*, 68.
elachior, Anthreptes collaris, 16.
elgeyuensis, Chlorophoneus, 24, 25, 26.
Emberiza cirlus, 35.
—— *citrinella caliginosa*, 57.
—— —— *citrinella*, 35, 57.
emini, Tchagra australis, 24.
——, *Telephonus australis*, 24.
epomophora sanfordi, Diomedea, 5, 32, 36.
ericetorum catherinæ, Turdus, 42.
——, *Turdus*, 35.
erlangeri, Telephonus senegalus, 50.
erythræus, Merops persicus, 43.
Erythropygia leucoptera leucoptera, 14, 15.
—— —— **pallida,** subsp. nov., 14, 15.
—— —— *vulpina*, 14, 15.
Eudyptes chrysocome, 31.
—— *pachyrhynchus*, 31.
—— *schlegeli*, 31.
—— *sclateri*, 31, 36.

Eudyptula albosignata, 31.
—— *minor*, 31.
eupterus, Pogoniulus pusillus, 19, 20.
eurycricotus, Zosterops, 70, 90.
europæa affinis, Sitta, 56.
—— *britannica, Sitta*, 57.
—— *cæsia, Sitta*, 56.

Falco cuvieri, 9.
—— *fasciinucha*, 8.
familiaris brittanica, Certhia, 42.
——, *Certhia familiaris*, 42.
Fantail, 33.
fasciinucha, Falco, 8.
finschi, Hæmatopus, 32.
flabellifera, Rhipidura, 33.
flavilateralis, Zosterops senegalensis, **15.**
Francolin, Jackson's, 80.
Francolinus coqui maharao, **10.**
—— *francolinus*, 80.
fremantlii, Pseudalæmon, **10.**
fricki, Zosterops senegalensis, 15.
Fringilla cœlebs, 34, 42, 57, 71.
—— —— *gengleri*, 71, 90.
frontalis, Anarhynchus, 32.
frugilegus, Corvus, 35.
fulvus, Gyps, 30.

Gallirallus australis, 33.
Gannet, Australian, 32.
Garganey, 30.
garguensis, Anthreptes collaris, **16.**
garzetta, Egretta garzetta, 68.
gavia, Puffinus, 31.
gengleri, Fringilla cœlebs, 71, 90.
gibberifrons, Anas, 32.
glareola, Tringa, 30.
Godwit, **31.**
Goldfinch, 34.
gongonensis, Passer griseus, 17, 18.
Goose, Canada, 34.
gouldi, Circus, 33.
Grebe, Black-necked, 30.
Greenfinch, 7, 34, 65.
griseiventris, Parus, 43.
griseus gongonensis, Passer, 17, 18.
—— *jubaensis, Passer*, 18.
——, *Puffinus*, 31.
—— *swainsonii, Passer*, 17, 18.
—— *tertale, Passer*, 17, 18.
—— *ugandæ, Passer*, 17.
guineensis, Parus leucomelas, 45.
gularis, Egretta, 68.
Gull, Andean, 5.
——, Black-backed, 32, 33.
Gull, Black-billed, 32.
——, Black-headed, 5.
——, Red-billed, 32.
Gymnorhina hypoleuca, 35.
Gypaëtus barbatus, 30.
Gyps fulvus, 30.

haasti, Apteryx, 33.
habessinica, Lanius senegalus, 50.
——, *Tchragra senegalus*, 50.
hæmastica, Limosa, 31.
Hæmatopus finschi, 32.
—— *reischeki*, **32.**
—— *unicolor*, 32.
Hammer, Yellow, 35.
Harpolestes australis littoralis, 24.
—— *senegalus mozambicus*, 50.
Harrier, 33.
harrisoni, Chloris chloris, 7, 65, 66.
Heron, Reef-, 32, 36.
——, White, 32.
Heteropsar acuticaudus, 58.
Himantopus leucocephalus, 32.
Hirundo angolensis, 20, 21.
—— *arcticincta*, 21.
—— *atrocærulea*, 58, 72.
—— *leucosoma*, 10, 11.
—— **megaensis**, sp. nov., 10, 11.
—— *puella*, 58.
—— *rustica rustica*, 20, 21.
—— *smithi smithi*, 72.
Hydroprogne caspia, 32.
Hymenolaimus malacorhynchus, 32.
hypoleuca, Gymnorhina, 35.
hypopyrrhus, Malaconotus pholiocephalus, 26, 27, 28.

igata, Pseudogerygone, 33.
insignis okuensis, Phormoplectes, 64, 90.
——, *Parus*, 44, 45.
——, *Pentheres*, 44.
——, *Phormoplectes insignis*, 64.
intensa, Aëthocorys personata, 10.
intermedius, Spreo pulcher, 55.
interpositus, Malaconotus, 26, 27.
Ixobrychus minutus, 30.

jubaensis, Anthreptes collaris, 16.
——, *Passer griseus*, 18.
——, *Vinago waalia*, 12.
——, *Zosterops senegalensis*, 15.
Junco oreganus, 74, 90.
Junco, Oregon, 74.

Kaka, Brown, 33.
kapitensis, Pseudonigrita arnaudi, 19.
Kea, 33.
kikuyuensis, Oriolus larvatus, 51, 52.
——, *Zosterops*, 70.
kismayensis, Dryoscopus ruficeps, 23.
——, *Laniarius ruficeps*, 23.
Kiwi, 32, 33.
kumaiensis, Leiothrix lutea, 62.

lacuum, Parus niger, 45.
lagdeni, Malaconotus, 28.
Lammergeier, 30.
Lamprococcyx lucidus, 31.
Lamprotornis chrysogaster abyssinica, 55.
—— *rufiventris*, 55.
Laniarius ruficeps cooki, 23.
—— —— *kismayensis*, 23.
—— —— *nuchalis*, 23.
—— —— *ruficeps*, 22, 23.
—— —— *rufinuchalis*, 22, 23.
Lanius mackinnoni, 21.
—— *somalicus mauritii*, 21.
—— *poliocephalus*, 27.
—— *senegalus*, 49.
—— —— *habessinica*, 50.
Lark, Scottish Sky-, 67.
lapponica baueri, Limosa, 31.
Larus bulleri, 32.
—— *dominicanus*, 32.
—— *ridibundus*, 5.
—— *scopulinus*, 32.
—— *serranus*, 5.
larvatus kikuyuensis, Oriolus, 51, 52.
——, *Oriolus monachus*, 51.
—— *reichenowi, Oriolus*, 52.
lateralis, Zosterops, 34, 37.
lawyri, Apteryx, 33.
Leiothrix lutea calipyga, 62.
—— —— **kumaiensis**, subsp. nov., 62.
leucocephalus, Himantopus, 32.
leucogaster arabicus, Cinnyricinclus, 7.
——, *Cinnyricinclus leucogaster*, 7.
—— *verreauxi, Cinnyricinclus*, 7.
leucomelas guineensis, Parus, 45.
—— *insignis, Parus*, 44.
——, *Parus*, 44, 45.
leucophrys nuttalli, Zonotrichia, 74.
—— *pugetensis, Zonotrichia*, 75.
——, *Zonotrichia*, 74.
leucoptera, Erythropygia leucoptera, 14, 15.
—— *pallida, Erythropygia*, 14, 15.
—— *vulpina, Erythropygia*, 14, 15.
leucorodia, Platalea, 30.
leucosoma, Hirundo, 10, 11.
Limosa hæmastica, 31.
—— *lapponica baueri*, 31.
littoralis, Anthus spinoletta, 29, 59.
——, *Harpolestes australis*, 24.
——, *Tchagra australis*, 23, 24.
livia, Columba, 34.
Locustella luscinioides, 30.
lollesheid, Barbatula pusillus, 20.
——, *Pogoniulus pusillus*, 19, 20.
longipes, Miro, 33.
Lophortyx californica, 34.
Loxia pytyopsittacus, 79.
lucidus, Lamprococcyx, 31.
Luscinia svecica cyanecula, 30.
luscinioides, Locustella, 30.
Lusciniola melanopogon, 30.
lutea calipyga, Leiothrix, 62.
—— *kumaiensis, Leiothrix*, 62.

mackinnoni, Lanius, 21.
Magpie, White-backed, 35.
maharao, Francolinus coqui, 10.
major newtoni, Parus, 6.
Malaconotus alius, 28.
—— *catharoxanthus*, 26, 27.
—— *interpositus*, 26, 27.
—— *lagdeni*, 28.
—— *monteiri*, 26, 28.
—— *poliocephalus hypopyrrhus*, 26, 27, 28.
—— —— *poliocephalus*, 26, 27, 28.
—— —— *schoanus*, 27.
malacorhynchus, Hymenolaimus, 32.
Mallard, 33, 34.
manningi, Chlorophoneus, 25, 26.
mantelli, Apteryx, 33.
massaica, Mirafra pœcilosterna, 13.
mauritii, Lanius somalicus, 21.
Megadyptes antipodes, 31.
megaensis, Hirundo, 10, 11.
meinertzhageni, Certhia familiaris, 42.
melanoleucus brevirostris, Phalacrocorax, 36.
——, *Phalacrocorax*, 32.
melanopogon, Lusciniola, 30.
melanotus, Porhyrio, 32, 38.
melanura, Anthornis, 33.
melba, Apus, 30.
Merops persicus erythræus, 43.
—— *superciliosa persica*, 43.
merula, Turdus, 35.
minor, Eudyptula, 31.
——, *Tchagra australis*, 24.
——, *Telephonus*, 24.
minutus, Ixobrychus, 30.

Mirafra pœcilosterna australoabyssinicus, subsp. nov., 13.
—— —— *massaica*, 13.
—— —— *pœcilosterna*, 13.
Miro australis, 33.
—— *longipes*, 33.
modicus, Onychognathus morio, 68, 69.
modularis, Prunella, 35.
Mohoua albicilla, 33.
Mollymawk, 31.
monacha, Oriolus monacha, 47, 51, 52.
—— *permistus, Oriolus*, 51, 52.
—— *rolleti, Oriolus*, 51, 52.
——, *Turdus*, 51.
monachus larvatus, Oriolus, 51.
montanus, Amydrus, 55.
——, *Onychognathus morio*, 55.
monteiri, Malaconotus, 26, 28.
morio modicus, Onychognathus, 68, 69.
—— *montanus, Onychognathus*, 55.
—— *neumanni, Onychognathus*, 55, 67, 68, 69.
——, *Onychognathus morio*, 54, 67, 69.
—— *rüppellii, Onychognathus*, 54, 55, 67, 68, 69.
—— *shelleyi, Amydrus*, 54.
—— ——, *Onychognathus*, 54.
——, *Turdus*, 54.
Morus serrator, 32.
mozambicus, Harpolestes senegalus, 50.
muhlei, Chloris chloris, 65.
münzneri, Chlorophoneus, 25, 26.
muraria, Tichodroma, 30.
Mynah, 35.

nereis, Sterna, 32.
Nestor notabilis, 33.
—— *occidentalis*, 33.
neumanni, Amydrus, 55.
——, *Onychognathus morio*, 55, 67, 68, 69.
newtoni, Parus major, 6.
niger lacuum, Parus, 45.
——, *Parus*, 44, 45.
—— *purpurascens, Parus*, 45.
nigrescens, Chlorophoneus, 25, 26.
nigricollis, Podiceps, 30.
nigrifrons, Chlorophoneus, 24, 25, 26.
notabilis, Nestor, 33.
nothus, Tchagra senegalus, 50.
novæseelandiæ, Prosthemadera, 33.
novæzeelandiæ, Anthus, 33.
——, *Cyanoramphus*, 33, 90.
nuchalis, Laniarius ruficeps, 23.
Nuthatch, Whitehead's, 29.
nuttalli, Zonotrichia leucophrys, 74.

obscurus, Pluviorhynchus, 32.
occidentalis, Nestor, 33.
okuensis, Phormoplectes insignis, 64, 90.
Onychognathus morio modicus, 68, 69.
—— —— *montanus*, 55.
—— —— *morio*, 54, 67, 69.
—— —— *neumanni*, 55, 67, 68, 69.
—— —— *rüppellii*, 54, 55, 67, 68, 69.
—— —— *shelleyi*, 54.
oregonus, Junco, 74, 90.
orientalis, Pomatorhynchus, 49.
Oriolus larvatus kikuyuensis, 51, 52.
—— —— *reichenowi*, 52.
—— *monacha monacha*, 47, 51, 52.
—— —— *permistus*, 51, 52.
—— —— *rolleti*, 51, 52.
—— *monachus larvatus*, 51.
—— *percivali*, 52.
oustaleti, Cinnyris, 70.
oweni, Apteryx, 33.
Oyster-catchers, 32.

Pachyptila, 37.
—— *turtur*, 31.
—— *vittata*, 31.
pachyrhynchus, Eudyptes, 31.
pallida atmorii, Zosterops, 70.
—— *basuticus, Zosterops*, 70.
—— *capensis, Zosterops*, 69.
—— *deserticola, Zosterops*, 70.
——, *Erythropygia leucoptera*, 14, 15.
—— *poliogastra, Zosterops*, 69.
—— *simplex, Zosterops*, 69, 70.
—— *winifredæ, Zosterops*, 69, 70.
——, *Zosterops pallida*, 69, 70.
pallidus, Telephonus senegalus, 50.
palustris, Acrocephalus, 79.
——, *Parus*, 79.
Parrakeet, 33.
Partridge, Black, 80.
Parus afer parvirostris, 43.
—— *ater ater*, 66.
—— —— *britannicus*, 66.
—— —— **pinicolus**, subsp. nov., 66.
—— *atricapillus*, 79.
—— *griseiventris*, 43.
—— *insignis*, 44, 45.
—— *leucomelas*, 44, 45.
—— —— *guineensis*, 45.
—— —— *insignis*, 44.
—— *major newtoni*, 6.
—— *niger*, 44, 45.
—— —— *lacum*, 45.
—— —— *purpurascens*, 45.
—— *palustris*, 79.
—— *rufiventris*, 43.
parvirostris, Parus afer, 43.

Passer domesticus, 35.
—— *griseus gongonensis*, 17, 18.
—— —— **jubaensis**, subsp. nov., 18.
—— —— *swainsonii*, 17, 18.
—— —— **tertale**, subsp. nov., 17, 18.
—— —— *ugandæ*, 17.
Penguin, 31.
——, Erect-crested, 36, 39.
Pentheres insignis, 44.
percivali, Oriolus, 52.
permistus, Oriolus monacha, 51, 52.
persica, Merops superciliosus, 43.
persicus erythræus, Merops, 43.
personata, Aëthocorys, 10.
—— *intensa, Aëthocorys*, 10.
petrosus, Anthus spinoletta, 41, 42.
Phalacrocorax carbo sinensis, 30.
—— *chalconotus*, 32.
—— *melanoleucus*, 32.
—— —— *brevirostris*, 36.
—— *sulcirostris*, 32.
—— *varius*, 32.
Phasianus colchicus, 34.
Pheasant, 33, 34.
Phormoplectes insignis insignis, 64, 90.
—— —— **okuensis**, subsp. nov., 64, 90.
Pigeon, Cape, 31.
——, Green, 63.
——, Rock-, 34, 41.
pinicolus, Parus ater, 66.
Pipit, 33.
——, Alpine, 29.
——, Meadow-, 6, 79.
Platalea leucorodia, 30.
platyrhynchos, Anas, 34.
Plover, Little Ringed, 30.
plumbea, Porzana, 33.
Pluviorhynchus obscurus, 32.
Pochard, 62.
Podiceps nigricollis, 30.
—— *ruficollis*, 36.
pœcilosterna australoabyssinicus, Mirafra, 13.
—— *massaica, Mirafra*, 13.
——, *Mirafra pœcilosterna*, 13.
Pogoniulus pusillus affinis, 19, 20.
—— —— *eupterus*, 19, 20.
—— —— *lollesheid*, 19, 20.
—— —— *pusillus*, 19.
—— —— *uropygialis*, 20.
poiciloptilus, Botaurus, 32.
poliocephalus hypopyrrhus, Malaconotus, 26, 27, 28.
——, *Lanius*, 27.
——, *Malaconotus poliocephalus*, 26, 27, 28.
—— *schoanus, Malaconotus*, 27.
poliogastra, Zosterops pallida, 69.
Pomatorhynchus australis congener, 24.
—— *orientalis*, 49.
—— *senegalus armenus*, 49–50.
ponens, Anthus spinoletta, 41.
Porphyrio melanotus, 32, 38.
Porzana plumbea, 33.
pratensis, Anthus pratensis, 6.
—— *whistleri, Anthus*, 6.
Prion, 31, 39.
Prosthemadera novæseelandiæ, 33.
Prunella collaris, 29.
—— *modularis*, 35.
Pseudalæmon delamerei, 10.
—— *fremantlii*, 10.
Pseudogerygone igata, 33.
Pseudonigrita arnaudi arnaudi, 19.
—— —— **australoabyssinicus**, subsp. nov., 19.
—— —— *kapitensis*, 19.
Pterocles alchata, 30.
puella, Hirundo, 58.
Puffinus carneipes, 31.
—— *gavia*, 31.
—— *griseus*, 31.
—— *tenuirostris*, 31.
pugetensis, Zonotrichia leucophrys, 75.
Pukeko, 32, 38.
pulcher intermedius, Spreo, 55.
—— *rufiventris, Spreo*, 55.
——, *Spreo pulcher*, 55, 56.
——, *Turdus*, 55.
punctatus, Stictocarbo, 32.
purpurascens, Parus niger, 45.
pusillus affinis, Pogoniulus, 19, 20.
—— *eupterus, Pogoniulus*, 19, 20.
—— *lollesheid, Barbatula*, 20.
—— ——, *Pogoniulus*, 19, 20.
——, *Pogoniulus pusillus*, 19.
—— *uropygialis, Pogoniulus*, 20.
Pyrrhocorax pyrrhocorax docilis, 54.
pytyopsittacus, Loxia, 79.

Quail, Brown, 34.
——, Californian, 33.
——, Swamp, 34.
querquedula, Anas, 30.

Rail, Water-, 62.
Raven, 80.
Redpoll, 34.
regia, Diomedea, 5.
Regulus regulus anglorum, 71.
—— —— *regulus*, 71.
—— *anglorum, Regulus*, 71.
reichenowi, Oriolus larvatus, 52.
reischeki, Hæmatopus, 32.

remigialis, Tchagra senegalus, 50.
——, *Telephonus*, 50.
restricta, Chloris chloris, 65.
Rhipidura flabellifera, 33.
rhodesiæ, Anthoscopus ansorgei, 45.
ridibundus, Larus, 5.
robertsi, Anthoscopus roccatii, 46.
roccatii, Anthoscopus roccatii, 45, 46.
—— *robertsi, Anthoscopus*, 46.
—— *taruensis, Anthoscopus*, 46.
rollevi, Oriolus monacha, 51, 52.
Rook, 35.
rothschildi, Anthoscopus caroli, 46.
rubiginosus bertrandi, Chlorophoneus, 25.
——, *Chlorophoneus*, 25.
ruficeps cooki, Laniarius, 23.
——, *Dryoscopus*, 23.
—— *kismayensis, Dryoscopus*, 23.
—— ——, *Laniarius*, 23.
——, *Laniarius ruficeps*, 22, 23.
—— *nuchalis, Laniarius*, 23.
—— *rufinuchalis, Laniarius*, 22, 23.
——, *Telephonus*, 22.
ruficollis, Corvus, 52, 53.
——, *Podiceps*, 36.
rufinuchalis, Dryoscopus, 23.
——, *Laniarius ruficeps*, 22, 23.
rufiventris, Lamprotornis, 55.
——, *Parus*, 43.
——, *Spreo pulcher*, 55.
rüppellii, Amydrus, 54.
——, *Onychognathus morio*, 54, 55, 67, 68, 69.
ruspolii, Tauraco, 9.
rustica, Hirundo rustica, 20, 21.

sacra, Demigretta, 32, 36.
Sad leback, 33.
salvadorii, Vinago australis, 63.
sandgroundi, Chlorophoneus, 25, 26.
Sand-Grouse, Pin-tailed, 30.
Sandpiper, Wood-, 30.
sandvicensis, Sterna, 30.
sanfordi, Diomedea epomophora, 5, 32, 36.
sarda, Sylvia, 29.
schalowi, Vinago australis, 64.
schlegeli, Eudyptes, 31.
schoanus, Malaconotus poliocephalus, 27.
scirpaceus, Acrocephalus, 79.
sclateri, Eudyptes, 31, 36.
scopulinus, Larus, 32.
scotica, Alauda arvensis, 39, 40, 41.
senegala warsangliensis, Tchagra, 50.
senegalensis australoabyssinicus, Zosterops, 15.
—— *flavilateralis, Zosterops*, 15.
—— *fricki, Zosterops*, 15.
senegalensis jubaensis, Zosterops, 15.
senegalus armenus, Pomatorhynchus, 49–50.
—— *camerunensis, Tchagra*, 49, 50.
—— *catholeucus, Telephonus*, 50.
—— *erlangeri, Telephonus*, 50.
—— *habessinica, Lanius*, 50.
—— ——, *Tchagra*, 50.
——, *Lanius*, 49.
—— *mozambicus, Harpolestes*, 50.
—— *nothus, Tchagra*, 50.
—— *pallidus, Telephonus*, 50.
—— *remigialis, Tchagra*, 50.
——, *Tchagra senegalus*, 49, 50.
—— *timbuktana, Tchagra*, 50.
serranus, Larus, 5.
serrator, Morus, 32.
Shag, Black, 32.
——, White-throated, 36.
sharpei, Anthoscopus caroli, 46.
Shearwater, 31.
shelleyi, Amydrus morio, 54.
——, *Onychognathus morio*, 54.
silvanus, Zosterops, 70.
simplex, Zosterops pallida, 69, 70.
sinensis, Phalacrocorax carbo, 30.
Sitta canadensis whiteheadi, 29.
—— *europæa affinis*, 56.
—— —— *britannica*, 57.
—— —— *cæsia*, 56.
Sky-Lark, 35.
smithi, Hirundo smithi, 72.
somalicus mauritii, Lanius, 21.
Sparrow-Hawk, 62.
Sparrow, Hedge-, 35.
——, House-, 35.
——, White-crowned, 74.
spinoletta, Anthus spinoletta, 59.
—— *littoralis, Anthus*, 29, 59.
—— *petrosus, Anthus*, 41, 42.
—— *ponens, Anthus*, 41.
Spoonbill, 30.
Spreo pulcher intermedius, 55.
—— —— *pulcher*, 55, 56.
—— —— *rufiventris*, 55.
Starling, 35, 75.
Starling, Violet-backed, 7.
steadi, Stictocarbo, 32.
Sterna nereis, 32.
—— *sandvicensis*, 30.
—— *striata*, 32.
Stictocarbo punctatus, 32.
—— *steadi*, 32.
Stilt, 32.
stresemanni, Zavattariornis, 7, 9.
striata, Sterna, 32.
Sturnus vulgaris, 35, 75.
—— —— *britannicus*, 75, 76.

sulcirostris, Phalacrocorax, 32.
Sunbird, 63.
superciliosa, Anas, 34, 37.
superciliosus persica, Merops, 43.
svecica cyanecula, Luscinia, 30.
swainsonii, Passer griseus, 17, 18.
Swan, Black, 33, 34.
Swift, Alpine, 30.
Sylvia sarda, 29.
sylviella, Anthoscopus caroli, 46.
Synoicus ypsilophorus, 34.

taitensis, Urodynamis, 31.
talatala, Cinnyris, 70.
taruensis, Anthoscopus roccatii, 46.
Tauraco ruspolii, 9.
Tchagra australis australis, 23.
—— —— *congener*, 24.
—— —— *emini*, 24.
—— —— *littoralis*, 23, 24.
—— —— *minor*, 24.
—— *senegala warsangliensis*, 50.
—— *senegalus camerunensis*, 49, 50.
—— —— *habessinica*, 50.
—— —— *nothus*, 50.
—— —— *remigialis*, 50.
—— —— *sengalus*, 49, 50.
—— —— *timbuktana*, 50.
Teal, Grey, 32.
teitensis, Anthreptes collaris, 16.
Telephonus australis dohertyi, 24.
—— —— *emini*, 24.
—— *minor*, 24.
—— *remigialis*, 50.
—— *ruficeps*, 22.
—— *senegalus catholeucus*, 50.
—— —— *erlangeri*, 50.
—— —— *pallidus*, 50.
tenuirostris, Puffinus, 31.
tephronotus australoabyssinicus, Turdus, 13.
——, *Turdus tephronotus*, 13, 14.
Tern, Fairy, 32.
——, Sandwich, 30.
tertale, Passer griseus, 17, 18.
Thrush, Song-, 35, 42.
Tichodroma muraria, 30.
timbuktana, Tchagra senegalus, 50.
Tit, Great, 6.
——, Marsh, 79.
——, Northern Scottish Coal, 66.
——, Willow, 79.
Tree-creeper, 42.
Tringa glareola, 30.
tristis, Acridotheres, 35.
Tui, 33.
Turdus ericetorum, 35.
—— *ericetorum catherinæ*, 42.
—— *merula*, 35.
—— *monacha*, 51.
—— *morio*, 54.
—— *pulcher*, 55.
—— **tephronotus australoabyssinicus**, subsp. nov., 13.
—— —— *tephronotus*, 13, 14.
turtur, Pachyptila, 31.

ugandæ, Anthreptes collaris, 16.
——, *Passer griseus*, 17.
ukamba, Cisticola chiniana, 58.
unicolor, Hæmatopus, 32.
Urodynamis taitensis, 31.
uropygialis, Barbatula, 20.
——, *Pogoniulus pusillus*, 20.

variegata, Casarca, 32.
varius, Phalacrocorax, 32.
verreauxi, Cinnyricinclus leucogaster, 7.
verticalis bannermani, Cyanomitra, 63.
—— *bohndorffi, Cyanomitra*, 63.
Vinago australis chobiensis, 63, 64.
—— —— **clayi**, subsp. nov., 63.
—— —— *salvadorii*, 63.
—— —— *schalowi*, 64.
—— —— *wakefieldii*, 63, 64.
—— *delalandii*, 64.
—— **waalia jubaensis**, subsp. nov., 12.
—— —— *waalia*, 12.
virens, Zosterops, 70.
viridisplendens, Cyanomitra verticalis, 63.
vittata, Pachyptila, 31.
vulgaris britannicus, Sturnus, 75, 76.
——, *Sturnus*, 35, 75.
vulpina, Erythropygia leucoptera, 14, 15.
Vulture, Griffon, 30.

waalia jubaensis, Vinago, 12.
——, *Vinago waalia*, 12.
wakefieldii, Vinago australis, 63, 64.
Wall-Creeper, 30.
Warbler, Grass, 77.
——, Grey, 33.
——, La Marmora's, 29.
——, Marsh, 79.
——, Moustached, 30.
——, Reed, 79.
——, Savi's, 30.
warsangliensis, Tchagra senegala, 50.
Weaver, Brown-capped, 64.
Weka, 33.
whistleri, Anthus pratensis, 6.
White-eye, 33, 34, 37.
Whitehead, 33.

whiteheadi, Sitta canadensis, 29.
winifredæ, Zosterops pallida, 69, 70.
Wrybill, 32.

ypsilophorus, Synoicus, 34.

Zavattariornis stresemanni, 7, 9.
Zonotrichia leucophrys, 74.
—— —— *nuttalli*, 74.
—— —— *pugetensis*, 75.
Zosterops eurycricotus, 70, 90.
—— *kikuyuensis*, 70.
—— *lateralis*, 34, 37.
—— *pallida atmorii*, 70.
Zosterops pallida basuticus, 70.
—— —— *capensis*, 69.
—— —— *deserticola*, 70.
—— —— *pallida*, 69, 70.
—— —— *poliogastra*, 69.
—— —— *simplex*, 69, 70.
—— —— *winifredæ*, 69, 70.
—— **senegalensis australoabyssinicus**, subsp. nov., 15.
—— —— *flavilateralis*, 15.
—— —— *fricki*, 15.
—— —— *jubaensis*, 15.
—— *silvanus*, 70.
—— *virens*, 70.

CORRIGENDA TO VOL. LXIII.

Page 33, line 24, for "*Cyanorhamphus*" read *Cyanoramphus*.
,, 64, line 31, for *Phormophlectes* read *Phormoplectes*.
,, 70, line 25, for *Z. euricricotus* read *Z. eurycricotus*.
,, 71, footnote, for *T. c. gengleri* read *F. c. gengleri*.
,, 74, line 16, for *Junco oreganus* read *Junco oregonus*.

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